

**Archaeology, Education and First Nations:
Two Case Studies from Central Saskatchewan**

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By

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ABSTRACT

While archaeology has the power to invoke powerful images of the past, those individuals interpreting the past for the public assume significant responsibility with regard to how they present those interpretations. In as much as archaeologists are as much a product of their own social, economic, political and intellectual environments as the "public" to whom they convey these messages, they face the challenge of providing meaningful and accurate interpretations about past cultures and lifeways.

Public archaeologists must consider an entirely different set of goals and objectives than individuals doing strictly research based projects. They are required to learn about the public they are educating, and in turn, develop comprehensive, meaningful and enjoyable experiences for the them. Too often members of the public assume that Indiana Jones represents a realistic image of the archaeologist. While it is unfortunate that this image prevails, it is also important to acknowledge that this image is what piques the public's curiosity about archaeological research in the first place.

In developing archaeology-based education programs for two archaeology sites in central Saskatchewan, the "public" being educated at one of the sites was primarily Aboriginal. Hence, the involvement of First Nations Elders, as well as participating students became an important part of the component.

Similarly, when asked to develop an educational program for a stone circle site, a First Nations Elder requested that research remain non-invasive. In both cases, working closely with these Elders promotes effective dialogue and mutual respect.

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CHAPTER ONE

INTRODUCTION

1.1 Archaeology and the Public

As one field of anthropological research, archaeology seems to hold a particular fascination for the public. Should one ask the public to name a famous archaeologist, chances are that Indiana Jones is likely to be the answer given. On the one hand, this popularized Hollywood image has brought an increased public awareness to a discipline once shrouded in mystery and once seemingly inaccessible to all but those employed in its profession. On the other hand, stereotypic beliefs can have a negative effect on one of the current goals of public archaeology, that of curriculum development (Devine 1991). In that respect, archaeology runs the risk of being perceived as frivolous, fanciful and not appropriate educational material (Devine 1991:11). But in turn this provides a challenge for the public archaeologist — how to modify the message without killing the messenger.

While public archaeology appears to be the new wave of the late 20th century, archaeologists by and large tend to think in terms of how public archaeology can best serve their own profession (Smardz 1997:101). Any discussion regarding the benefits of public archaeology as a means to

increase public awareness and in turn foster public support for archaeological research is in effect self serving.

Yet at the very core of such discussion it can be argued that the archaeologists' ultimate goal is to do just that — share its findings with the public, for it is the public who ultimately pays for archaeological research (Bahn 1996). This is certainly the case in public archaeology, because as its title suggests, public archaeology should involve the public in every aspect of its undertakings. For the purposes of this thesis, public archaeology is defined as archaeological research involving the "public" in all aspects of the two projects under review including: the development of the project; public participation in field and laboratory components, and; in the interpretation of the data collected.

The manner in which the past is presented to the public has a direct effect not only on individual and collective perceptions regarding the value of heritage management and cultural programming, but also the degree of support realized for future archaeological endeavours (Lipe 1984). Thus the archaeologist must make every effort to make both the learning and interpretive experiences authentic and accurate. Moreover, the public needs to know why archaeology is worth doing. It needs to be relevant for them (MacLeod 1977).

This then is an enormous responsibility since archaeologists cannot convey their findings objectively (Bahn 1996:82; Ucko 1990:xi). The archaeologists' world view, conditioned by social, political, and ideological beliefs or prejudices cannot be divorced from the individual presenting the "facts" of their research to the public (Bahn 1996:82). Public archaeologists must make every effort to be aware of the social, political and ideological

beliefs and/or prejudices of the people with whom they are interacting, such as educators and First Nations.

Indeed after considerable self-reflection and debate by scholars, it has become increasingly clear that the discipline of archaeology can no longer afford to detach itself "from the mechanisms and programs that attempt to communicate archaeological information to the lay public (Jameson 1997:11)". Therefore, presenting the past to the public has become an increasingly complex challenge, requiring clear and informed objectives, for in Canada, it is most often the Aboriginal past that is being interpreted.

1.2 Goals of the Study

This thesis provides a critical examination of two public archaeology programs carried out at two archaeological sites in central Saskatchewan: the Grace Adam *Metawewinihk* site and the Eagle Creek Stone Circle site. The former realized its first field season in 1995, the latter in 1997. Both sites are located on property owned by the Saskatoon Catholic Board of Education (Figure 1.1). A critical evaluation of the goals of educators, First Nations and archaeologists with respect to curriculum development in Saskatchewan is presented.

While effective educational programming has the potential to increase public awareness about the scientific nature of archaeological research, it also provides the opportunity to teach about the importance of the ethical co- management of heritage sites and cultural materials with First Nations. Insofar as today's students are the future's decision makers, by designing effective educational programmes now, we are providing the potential to ensure favourable public support tomorrow — but what benefit does that belief hold for First Nations?

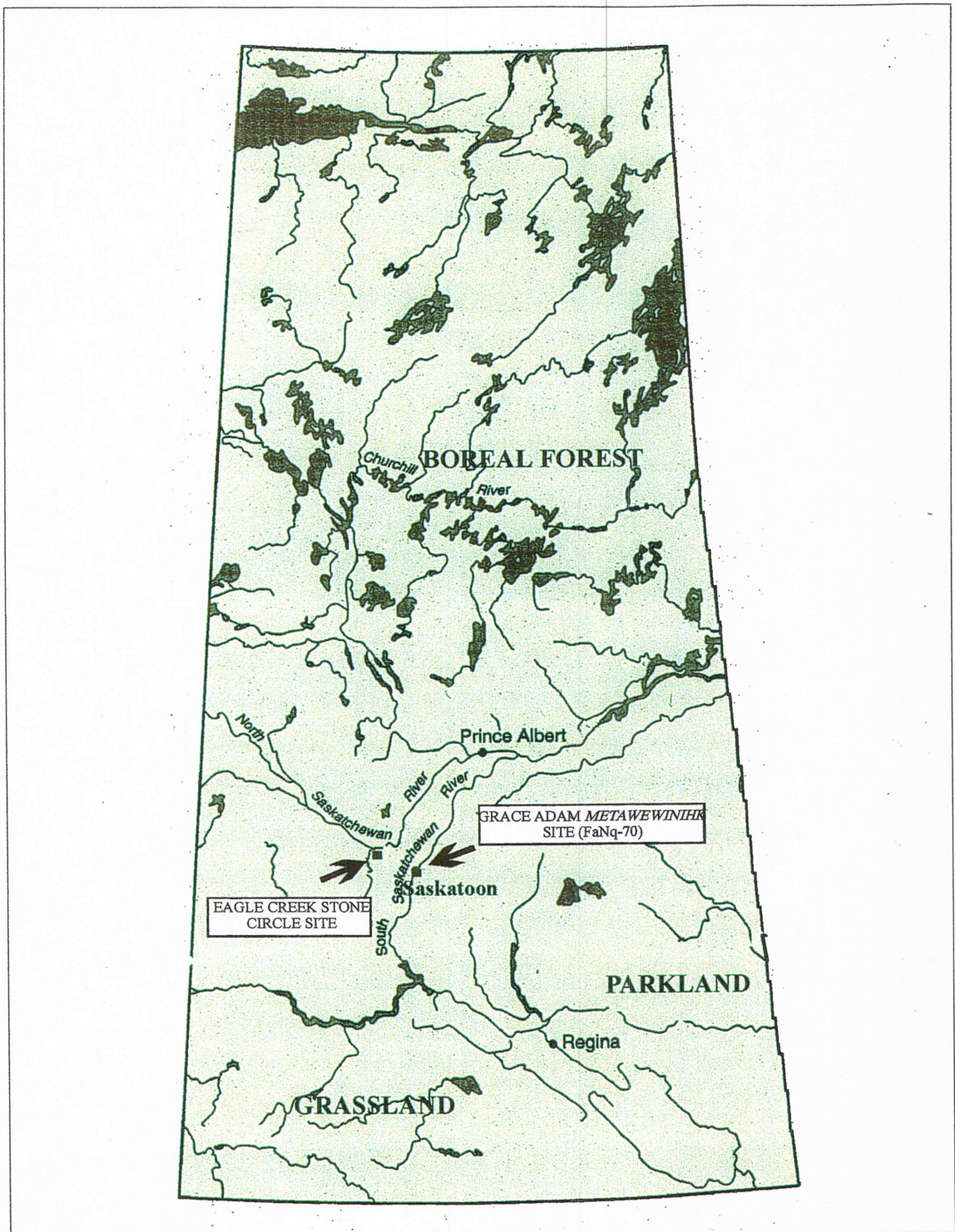


Figure 1.1 Map of Saskatchewan Identifying the locations of the Grace Adam *Metawewinihk* Site (FaNq-70) and the Eagle Creek Stone Circle Site

That there is value in developing educational archaeology programs in Canadian schools has been well documented over the past decade (Devine 1991, 1998; Fedorak 1994; Jameson 1997; Musser 1996; Nicholas 1997; Pokotylo and Brass 1997; Smardz 1997). Moreover, it is the process of doing archaeology, rather than learning about archaeology that provides the greatest educational benefits (Fedorak 1995; Higgins and Holm 1985; Smardz 1997). Unfortunately, too few programs are developed with First Nations in mind.

1.3 Education, Curriculum Development & Archaeology

Developing archaeology programs for education is not an easy task. First of all most archaeological information is not available to educators in accessible format. Moreover, educators have a large enough workload without having to learn an entirely new field of study (Smardz 1997:104). Thus, the responsibility for incorporating comprehensive and accessible archaeology programming into elementary and high school curriculum lies with the archaeologist.

That task requires not only an in-depth knowledge of the process of curriculum development but also a critical assessment of which subject areas are best served by studies in archaeology. One cannot assume that any education curriculum which incorporates materials about the past provides a positive education. Indeed, despite good intentions and considerable efforts, prior to 1986, there was a serious lack of in-depth attempt to confront the relationship between education and archaeology (Ucko 1990).

Fortunately, in the 1990's many public archaeology projects have spent an enormous amount of time and effort in doing just that — making the connection between the two disciplines in a comprehensive and

meaningful manner (for a full review see Jameson 1997). Yet before realistic and effective educational programming or curriculum development in archaeology can occur, archaeologists must be familiar with the multicultural demographics of the "public" with whom they are interacting. For not only has the profession of archaeology undergone a radical transformation in the past several decades, so too has Canadian social studies and science education.

"In a word, it can be said that public beliefs, attitudes and values leading to expressions of public concern that come to be reflected at the political and administrative levels may frequently be starting points for curriculum change. (Tomkins 1985:22)"

It was following the decentralization of curriculum development in 1960, that this process was transferred to provincial departments of education and/or provincial ministries (Tomkins 1985). Saskatchewan's education system is based on *The Education Act* with all recent curricula required to include *Indian* and *Metis* content and perspectives (Saskatchewan Education 1996). This was effected in response to *The Indian and Metis Action Plan* developed in 1995 by the *Indian and Metis Education Advisory Committee* (1996b).

This reflects the needs of the Aboriginal population in Saskatchewan, which makes up approximately 11.4% of the total population and is growing at a rate faster than the overall provincial population (Saskatchewan Education 1998). Statistics Canada estimates that by the year 2016 the Aboriginal population of Saskatchewan will almost double in size to measure between 16 and 18.1 percent of the total provincial population (Loh 1995).

Regarding the demographic distribution of Aboriginal students, a recent shift in enrollment patterns suggests a tendency for more students to

be enrolled in separate schools and Federally-funded Indian schools, and fewer in public schools. Furthermore, all federally-funded Indian schools except one are Band-controlled (Saskatchewan Education 1996c).

Hence, understanding the: 1) processes and goals of provincial curriculum development, and; 2) the multicultural demographics in which one hopes to interact, public archaeology programming at the Grace Adam Metawewinihk and the Eagle Creek Stone Circle Sites should indeed reflect a uniquely Saskatchewan character.

1.4 Chapter Outline

Following the introduction in Chapter One, Chapter Two addresses the theoretical perspective of the thesis. Specifically, three perspectives are considered: that of the public archaeologist; that of First Nations regarding archaeology; and that of educators regarding archaeology. The first provides a brief history regarding the concept of common law and public trust, as well as what public archaeology is and how changing ethical concerns have altered the way it is practiced today.

The First Nations perspective addresses issues of concern as regards non-existent federal heritage legislation. Similarly, the recently published voice of Aboriginal archaeologists and non-archaeologists are considered with respect to curriculum development, educational projects and interpretive programming.

The educational perspective reviews the relevance of archaeology in educational programming. Examples of teacher initiated and archaeologist initiated programs are discussed. Furthermore, the goals of public archaeology with regard to educational programming are considered.

Chapter Three provides a brief review of curriculum development as well as the general goals and objectives of educators in Saskatchewan. Demographic data regarding Aboriginal participation, economic status and involvement in education and curriculum development in Saskatchewan are provided. Finally, Aboriginal perspectives regarding appropriate educational programming in Saskatchewan is discussed.

Chapter Four details the Grace Adam *Metawewinihk* Archaeological Project from its inception and original objectives, to the involvement of First Nations Elders and changes in project curriculum. Student participation is detailed in relation to outlined lesson plans. In addition, excavation results are assessed with regard to both the archaeological materials recovered and project objectives.

Chapter Five documents site discovery and educational program development at the Eagle Creek Stone Circle site. An emphasis is placed on the important role played by a native Elder in terms of project and curriculum development. With regard to the field component, a strong argument for non-invasive archaeology-based education programming is provided.

Chapter Six is the Discussion and Interpretation chapter. It provides an analysis of the results of each of the projects under review. Moreover it considers the benefits to educators, First Nations and archaeologists, specifically in terms of cultural programming. A summary of the role each interest group can play in curriculum development of this nature is provided. Recommendations for future research are also discussed.

Chapter Seven provides a brief summary of each of the project goals and results. In addition some general conclusions are presented.

CHAPTER TWO

THEORETICAL PERSPECTIVE

2.1 Introduction

Cultural resources have the ability to evoke powerful images of the past (Cleere 1989). Through the various lines of archaeological evidence regarding past lifeways, humans develop their own ideas about, or links to, the past. And the particular value or relevance that society places on heritage resources is the result of many factors. Historical, cultural, intellectual, and psychological experiences combine to fashion specific value systems, and concomitantly, the value societies place on heritage resources. Such values are not inherent, but rather, are learned or discovered by individuals from their own particular frames of reference (Lipe 1984). Since all individuals have a right to their own values about themselves and the world, they must also be socially responsible in acting out such values.

Public education programs, museum displays, television, radio, books and movies communicate information about the past in an expedient and often repetitive manner (Pokotylo and Mason 1984; Lipe 1984). Legislated policies, conditioned by the social and political ideals of a society determine appropriate guidelines for heritage management in both public and scientific arenas (Ucko 1989). Hence, those individuals who decide how the past is presented to the public own the responsibility for critical, reliable and realistic interpretations. However, since archaeologists

cannot convey their findings objectively (Bahn 1996; Ucko 1990), this responsibility is one fraught with challenge.

Moreover, individuals involved in public archaeology shoulder the responsibility for the effective and ethical management of public programs. This requires the archaeologist to be critically aware of the relationship that exists between the social milieu in which archaeology is practiced and the nature of archaeological research as a scientific endeavour (Trigger 1986, 1984, 1980). The manner in which one practices archaeology is very much a reflection of contemporary life, both intellectually and sociologically (Fowler 1981). In other words, "critical theory" in archaeology is concerned with the self-reflexive nature of the investigator.

Therefore, when developing archaeology-based education programs, one must be prepared to critically assess the social and political climates not only of one's own discipline and the public with whom they interact, but also one's own social and political worldview. Without this type of ideological reflection, it is impossible to develop public archaeology programs that benefits anyone other than archaeologists themselves. While interactive and effective interpretation may well capture the imagination of the public, the interpretation of the past will always contain an element of the present (Preucel and Hodder 1996:526)

With regard to the archaeology-based education projects under review, much more than providing a public outreach program is required. A comprehensive understanding of the goals of educators as well as the needs of First Nations and *Metis* students is necessary. A public archaeology program should provide students with an opportunity to enhance their critical thinking, problem solving, communication and mathematical skill

levels (Fedorak 1994; Musser 1997), It should also involve members of the Aboriginal community.

Such interaction provides insight into the type of community in which participating students live, which in turn provides a framework for developing appropriate, respectful and meaningful program activities. To summarize, a critical examination of the educational and social environments of the students and educators involved in the two projects under review, is necessary in order to develop appropriate, respectful and relevant programming.

2.2 A History of Public Archaeology

The primary goal of public archaeology is to first of all create an interest in archaeology, then provide a means to maintain that interest (Smith and McManamon 1991). This assumes that there is a reason to create that interest. Indeed most people have a basic curiosity about the past, one that is influenced by a variety of media enriched experiences. A further assumption is that cultural resources belong to all people, not simply those who study them for a living (Mulvaney 1985). The idea that cultural resources and/or materials are common property can be traced to the thirteenth century (Erh Soon Tay 1985).

The "law of finding", developed from the thirteenth century onward, addressed the question of whether or not things were secreted, lost or abandoned, and who subsequently could claim title. In that sense, title was retained by the owner, unless otherwise abandoned, in which case, the individual who occupied the land could claim title. However, in the case of treasure troves and wrecks, title lay exclusively with the monarch, much as it does today in England and Australia (Erh Soon Tay 1985). According to

Jutish laws established in 1241, if any person "should find gold or silver in a barrow, or by turning of a plough", it must be handed over to the monarch (Ehr SoonTay 1985).

The first national legal code to acknowledge the intrinsic value of heritage remains was the Swedish Royal Proclamation of 1666, identifying all objects of antiquity as "Property of the Crown". Similarly the Danish law of treasure trove, *danefae* (dead man's property), stands the same today as when it was first incorporated into the Danish constitution in 1683 (Kristiansen 1984, Erh Soon Tay 1985). In contrast, the Spanish monarchy of the 16th and 17th centuries viewed the gold and silver objects found in the Americas strictly in terms of financial convertibility (Cleere 1989).

It was not until the 18th century that a fully developed sense of a public or national interest in heritage resources was established in Europe (Erh Soon Tay 1985). By the late 1930's protective heritage legislation was in place in most parts of the world, although its enforcement varied in degree and kind (Cleere 1989). As a general rule, specific heritage legislation is guided by the constitutional system of a given country. Countries with a centralized government such as England, France and enact heritage legislation at the Federal level. Countries with a decentralized legislative structure such as Canada and Australia, enact heritage legislation at a provincial, state or territorial level. Other countries, like the United States have enacted heritage legislation at both the Federal and State levels (CAA 1986:5).

With regard to public archaeology today, existing legislative policies which define the terms and conditions of appropriate archaeological assessment and research, are also the governmental policies under which public archaeologists operate. Just as important, public archaeologists

maintain a certain belief that because the public either directly or indirectly funds archaeological research, the public has a right to be involved in that research.

Moreover, current legal mandates should encourage archaeologists to ensure that archaeological information is provided to the public in an informative manner (Jameson 1997). This requires that communication of information be given in an accurate and entertaining manner for the non-specialist (Jameson 1997:13). Furthermore, public archaeologists developing programs have the responsibility to foster a dialogue with the public which distinguishes between the goals of research, and the goals and objectives of public interpretation (Davis 1997).

Hence public archaeology and interpretation today must consider the intended audience, not simply the resource base. This requires knowledge of the social and political environment in which a project is undertaken. In other words, it is incumbent upon researchers to know their audience and to make the educational, interpretive, or field experience as interesting as possible. In doing so, an interest in archaeology is not only created, but also maintained. In turn, public support for archaeology is realized, which translates into more and better opportunities for archaeologists in the future.

2.3 Public Archaeology and Education

Public education within the discipline of archaeology may well be the new wave of the late twentieth century (Smardz 1997: 101). Indeed, over the past two decades, public archaeology has become the focus of many public outreach and education programs. Surrounded by an air of mystery

and excitement, archaeology fascinates both students and educators (Heath 1997).

That there is value in providing archaeology-based education programming in Canadian schools has been well documented (Devine 1991, 1998; Fedorak 1994, Jameson 1997, Musser 1996a; Nicholas 1997, Pokotylo and Brass 1997; Smardz 1997).

Not only are professionals developing archaeology-based education programs for students and teachers, but also teachers themselves are initiating archaeology experiences for their students. A good example is the experience of two educators in Arizona who decided to teach archaeology in their classrooms. Due to the lack of readily available information and resources, they took the initiative to take university courses, join archaeology organizations and read independently. As a result they developed and modified teaching materials and further tested them in their classrooms. These materials are now a part of the school curriculum in their school district (Benge and Miller 1988).

Likewise, some educators have taken the initiative to develop simulated digs for their students (Fowlkes Carroll 1987; Passe and Passe 1985; Van Tilburg 1981). Such activities provide students with the opportunity to develop skills for scientific inquiry, problem solving, cooperative learning and critical thinking. Furthermore, when focused on excavation activities, learning by doing does not seem so much like school (Gardner 1997; Passe and Passe 1985; Van Tilburg 1981). A good example of a simulated dig in Saskatchewan is found at Wanuskewin Heritage Park (WHP). A discussion of the development of educational programming at WHP is found in Chapter 4.

One of the benefits of teaching archaeology is that it can be used as a vehicle to teach other subjects such as art, art history, science, social studies and mathematics. Unfortunately, the majority of archaeological information is not accessible to educators and therefore they must still rely on the archaeologist to provide either user-friendly educational packages, or classroom lectures. Educators have full schedules and finding the time to learn a new field of study is not always feasible (Smardz 1997).

In providing information, lectures and/or interpretations to the public, it is apparent that the goals of the public archaeologist are far different than the goals of research (Davis 1997). This requires an understanding of what it is you want to teach, and to whom you will be teaching (Potter 1990); therefore incorporating such goals into the site research plan is necessary. Thus, by focussing on the process of archaeology, rather than the products of archaeology, the archaeologist is fulfilling her/his obligation to provide a quality experience for the public, who in one way or another, is paying for such projects (Jameson 1997).

2.4 First Nations and Archaeology

2.4.1 Federal Policies

In Canada, there is only one federal mandate in place to deal with heritage resources relating to the contexts of research, public interpretation, or protection for heritage sites: the Environmental Protection Act. Parks Canada (formerly Canadian Parks Service) does actively engage in appropriate site inventory, impact assessment and mitigation activities in National Parks, and operates within the general guidelines of the Environmental Assessment Review Process (EARP) (Government of Canada 1984, Burley 1994).

For agencies outside of Parks Canada, it has been argued that EARP is sufficient to meet those demands, particularly due to the fact that it has been drafted into comprehensive environmental legislation (FEARO 1992; Burley 1994). However, when viewed from the perspective of dealing with cultural resources on land controlled by federal departments other than Parks Canada, Burley (1994:91) argues EARP is problematic.

Specifically, the decision whether or not to carry out an impact assessment is currently in the hands of the land manager, most often the development sponsor. Unfortunately, most land managers have little, if any knowledge of archaeology. Moreover, since there exists no independent review requirements or third party accountability, in many cases there is no trained project staff to advise or carry out archaeological work in these areas. In other words, there is no guarantee that archaeological concerns will be integrated into an environmental assessment if the department or sponsor carrying out the assessment does not know anything about archaeology (ibid).

In Canada, the question of appropriate heritage management on Indian land is the responsibility of the Department of Indian Affairs. As it stands today, there is no Federal legislation in place to address the involvement of Aboriginal communities with regard to archaeological resource management on Indian lands, although some failed attempts have been made. When archaeology is conducted on reserve lands, it can feasibly fall under local government jurisdiction; however, when practiced on traditional lands, it reverts back to provincial or state level government (Yellowhorn 1996:37).

Indeed, the only federal attempt to provide comprehensive legislation in this regard was the proposed *Archaeological Heritage*

Protection Act, which failed for the reasons provided below. Had it been successfully passed in the legislative assembly, there would have been, at the very least, direction for archaeologists wishing to conduct research on Indian lands. As it stands, however, "the default legislation is still the much maligned *Indian Act*, whose potential for accommodating archaeological management on Indian reserves would require little more than political will" (Yellowhorn 1996:38; 1993).

In 1988 the Department of Communications put forth a discussion paper entitled "Federal Archaeological Heritage: Protection and Management". It was intended to provide a means of developing "dialogue with interested groups about archaeological protection and management issues" (MacDonald 1988:5). Interested parties were invited to submit written comments in response to the paper, whereby the Federal government hoped to develop new approaches to the management of archaeological resources under its jurisdiction.

To that end a two day conference was held in Ottawa in March of 1989, comprised of Aboriginal representatives from across Canada (Dunn 1991b). In December the following year a consultation team was struck, with representatives from five regions across Canada, representing approximately 750,000 individuals of Aboriginal heritage. In the meantime, Canada's (then) Communications Minister, Marcel Masse tabled draft heritage legislation in the House of Commons. The proposed bill met with overwhelming resistance, most particularly from the Aboriginal community. As one individual remarked, "it is the Indian Act all over again (Dunn 1991a:3).

As a result an Aboriginal Archaeological Heritage Symposium was organized and held in Hull, Quebec in February 1991. It served as a forum

for the expression of Aboriginal concern regarding the proposed legislative bill. Summaries of the consultations carried out in 1989 and 1991 were prepared by Aboriginal Consultant, Martin Dunn (1991a, 1991b) for the Archaeology Heritage Branch in Ottawa. The first of these, entitled "My Grandfather is Not an Artifact" made it unmistakably clear that the proposed bill was unacceptable to Aboriginal people (1991a).

In recent years, the concept of "co-management" of heritage resources has been considered in terms of legislative policies such as Bill C-70, the 1993 Heritage Conservation Statutes Amendment Act of British Columbia. Under that amendment, the Heritage Conservation Branch will not issue either an impact assessment, mitigation or research permit to an archaeologist without first obtaining the approval of the local First Nations. Similar options are being defined in land claims, such as the Nunavut Final Agreement which includes provisions for Inuit involvement (Yellowhorn 1996). However, Yellowhorn (1996:37) points out that in terms of specific treaty rights for bands, although the judiciary acknowledges Native claims, it continues to be ambivalent in terms of its protection of them

By way of comparison, in the United States, there are numerous federal heritage legislative policies in effect. These include (but are not limited to) the Antiquities Act, the National Post-contact Preservation Act, the Archaeological Resources Protection Act and the American Indian Religious Freedom Act. The latter Act is significant because it contains provisions affording protection to "sites considered important in the expression of Native American religious beliefs or lifeways (Doyel 1982:638)".

2.4.2 First Nations Perspective

First Nations peoples and archaeologists tend to perceive their respective worlds in different ways (Linklater 1994). Spirituality pervades traditional First Nations perceptions about the world in which they live. In contrast, archaeologists do not normally associate spirituality with the objects they study. Moreover, within First Nations communities, there exists widespread skepticism, doubt and suspicion, as well as mistrust regarding the validity of archaeological theories which attempt to explain the Aboriginal past (Yellowhorn 1996:28).

Few natives have written about the discipline of archaeology (Johnson 1977; Mayer and Anton 1986; Yellowhorn 1993, 1996; Linklater 1994) and First Nations scholars tend to focus on legal and social reasoning when confronting issues of heritage management. This is likely a reflection of the fact that very few are trained as archaeologists, while a correspondingly greater number of First Nations individuals are trained as lawyers (Yellowhorn 1996:28).

In as much as heritage resources typically become property of the crown, then, the question of ownership and jurisdiction is a point of contention between the two groups. Indeed, the rules of the game are changing for archaeologists. No longer can we turn a blind eye to the peoples whose past we invariably attempt to interpret. In Canada, the Canadian Archaeological Association (1996) has approved a document that requires the accountability of its members in dealing with Aboriginal peoples. Entitled, a "Statement of Principles for Ethical Conduct Pertaining to Aboriginal Peoples" it provides a first step toward establishing a positive working relationship between First Nations and archaeologists.

Similarly, archaeologists continue to enter into dialogue with First Nations in attempts to improve communication and understanding between the two groups. To that end, workshops like the one held by the Saskatchewan Association of Professional Archaeologists at Wanuskewin Heritage Park in 1994 provide a necessary venue for archaeologists to learn about appropriate behaviours with regard to First Nations heritage resources. Concepts like "respect", "offering" and "talk to the Elders" are common topics of discussion by First Nations at these meetings (Ramsay 1994). Dialogue of this nature is important in terms of maintaining good relationships and should continue to take place. (Yellowhorn 1996)

It is evident that First Nations Elders have a great deal to contribute to our understanding of the past. Sites of a spiritual or sacred nature are a notable topic of concern not only to the Aboriginal community, but to the archaeological community as well. Archaeologists are unable to identify sites of this nature without information provided by First Nations peoples. Hence, without effective dialogue between the two groups, we run the risk of destroying objects or sites that archaeologists do not recognize as having any connection to the Aboriginal past.

A good example of how this can occur is outlined by Linklater (1994). Due in large part to geographic isolation, the Nelson House Cree were able to retain much of their traditional culture and economy well into the middle of the twentieth century. However, in 1970 Manitoba Hydro, with the approval of the Federal and Provincial governments, diverted the flow of the Churchill River into the Nelson River, inundating much of the band's traditional territories (1994:2). This resulted not only in the loss of traditional economy and lifeways, but also the post-contact landscape of the Nelson House Cree. Unrecognizable to non-Aboriginal peoples, many

locations of cultural significance were inundated by the project. Although the project was not archaeological in nature, it illustrates the importance of dialogue when preparing for research.

Fortunately, in recent years many First Nations people have come to value archaeology for a variety of reasons: they wish to have their traditional cultural practices recorded; archaeological evidence is helpful in establishing post-contact and legal rights to land claims; and, many First Nations groups want to have their oral traditions recorded before they are forgotten (Trigger 1997).

Furthermore, there is good potential for partnerships between archaeologists and First Nations, which would serve to strengthen an awareness of the differences between the two value systems (Lawson 1997:34). This requires an understanding that neither needs to replace the other, but rather, both should be respected. Better still, bridge building requires more than a long-term commitment to finding solutions, it requires the development of good cross cultural communication skills and an awareness of other world views (Lawson 1997:35).

As one example, in 1998 the Skeetchestn Indian Band of the Secwepemc Nation in Kamloops passed their own heritage legislation entitled the "Territorial Heritage Conservation Law". This law requires any archaeologist who has applied for a permit under the Heritage Conservation Act of BC to carry out research in Secwepemc territory, to provide the band's Cultural Resources Management Department (CRMD) with a copy of any and all documents concerning that permit. The archaeologist must also apply for a permit with the CRMD which reserves the right to review and accept/deny the permit. The CRMD also has

established its own Cultural Resources Management Register (Skeetchestn Indian Band 1998).

In summary, then, in order to develop appropriate programming for a predominantly Aboriginal student body, it is important to learn about differing world views and expectations. This requires both effective listening and communication skills on the part of archaeologists, First Nations and educators. This type of dialogue takes time and persistence, but if done properly, can be beneficial to all parties involved. In terms of program development for the projects under review, listening to the voice of the Elders as well as to Aboriginal and non-Aboriginal educators was a key component to developing a successful project.

CHAPTER THREE

EDUCATION IN SASKATCHEWAN

3.1 Education in Saskatchewan

3.1.1 An Introduction

Following the decentralization of curriculum development in 1960, this process was transferred to departments of education and provincial ministries (Tomkins 1985). In Saskatchewan today, the education system is legislated under the recently revised Education Act of 1995. This act defines the roles and responsibilities of education councils, commissions, boards of education, administrators, boards of trustees, educators and school advisory committees (Saskatchewan Education 1999).

In addition, Saskatchewan Education (1986, 1985, 1984, 1981) maintains a series of handbooks regarding curriculum development, cross-cultural communication, policy proposals and program reviews. Just as important, curriculum guidelines for each subject area are available from the Queen's Printer in Regina, with minor exceptions such as the provincial social studies program, which is currently under review.

Foundational beliefs outlined by Saskatchewan Education (1988) regarding learning encompass a number of approaches to education such as: 1) the belief that there is more than one type of learning; 2) the belief that learning is a function of the total environment, hence the result of an interactive process; and 3) the belief that a variety of factors influence

learning such as the relevance of content, the learner's interests, needs and goals, the developmental level of the learner, and the active participation of the learner. Therefore, when developing an archaeology-based education program, it is important to take this belief system into account.

3.1.2 Saskatchewan Education Indicators

First published in 1994, the Saskatchewan Indicators Program provides a yearly accounting to parents, educators, and all interested parties regarding the way the education system is meeting educational goals in Saskatchewan (Saskatchewan Education 1996c, 1997b). The Indicators Program provides information regarding the social, economic and demographic factors that currently influence education in the province. The program further provides education decision makers with data that can be utilized to improve or enhance existing curricula in response to community needs (Saskatchewan Education 1998).

For example, Saskatchewan Education has entered into an agreement with the Federation of Saskatchewan Indian Nations in order to develop a comprehensive curriculum outline that describes First Nations culture, history and spirituality. Similarly, in conjunction with the Prince Albert Grand Council, Saskatchewan Education has recently made a commitment to study Aboriginal language learning. Thus Saskatchewan Education now considers itself a leader among the western provinces and territories in terms of developing a common curriculum framework for Aboriginal languages (Saskatchewan Education 1998:6).

3.1.2.1 Demographic Data

As of September 1, 1998 it is estimated that there are 108 school divisions in Saskatchewan, of which 79 are public school divisions, 20 are separate school divisions and 9 are francophone school divisions. During the 1997-98 school year there were 192, 508 Kindergarten to Grade 12 (K-12) students enrolled in Saskatchewan's provincially funded education system (Saskatchewan Education 1998:14). The demographics that indicate the systems in which students are enrolled is gradually changing. While enrollments are declining in public schools, they are increasing in Roman Catholic separate schools.

Just as important, the number of students enrolled in independent and First Nations-controlled schools is also increasing. The number of K-12 students living on Indian Reserves has increased from 13,446 in 1987-88 to 17,571 in 1997-98. Also during that period of time (1987-1997), the number of students living on reserves who attend First Nations-controlled schools has increased from 50.7% in 1987-88 to 78.9% in 1997-98 (Saskatchewan Education 1998:15).

Demographic data further suggests that in contrast to the general population in Saskatchewan which, as a whole is aging, the Aboriginal population is experiencing an opposite trend. In other words, the proportion of the Aboriginal population that is of preschool age is greater than the proportion of non-Aboriginal population of the same age (Saskatchewan Education 1996c).

Also interesting, is the fact that as of 1996, 20.9 percent of all Saskatchewan children lived in poverty, with the majority (68.7%) belonging to single parent families (National Council of Welfare 1996). While the poverty rate in Saskatchewan is the same as the Canadian

poverty rate, it maintains the second highest rate of child poverty in the country (ibid). Information of this nature has a significant impact on how Saskatchewan Education continues to meet the educational needs of a growing, and often impoverished First Nations population (Saskatchewan Education 1996a).

Fortunately, Saskatchewan Education recognizes the needs of underprivileged families and has developed a Community Schools Program to administer to those needs. The Community Schools Program was first developed in 1980 to address urban Aboriginal poverty in the cities of Saskatoon, Prince Albert and Regina (Saskatchewan Education 1996a). The Program is designed to provide First Nations and *Metis* students with a learning environment which is culturally affirming and respectful of their histories, experiences and educational needs (Saskatchewan Education 1996b). The learning program and educational approaches incorporate all aspects of the Core Curriculum, including Common Essential Learnings (CELs).

The latter aspect of the Core Curriculum identifies six learning categories: communication, numeracy, critical and creative thinking, technological literacy, personal and social values, and independent learning. The CEL perspective places an emphasis on learning in order to understand and apply knowledge in daily life, rather than learning by rote. Furthermore, the CEL perspective considers that what children learn depends not only on what they are taught, but also on how they are taught. In that regard, their developmental level, interests and experiences are of primary importance (Saskatchewan Education 1988:10).

Therefore, the CEL perspective has been directly incorporated into the Community Schools Program. One of the goals of the program is to

have school staff, parents and the community share responsibility for the education and well-being of students. An additional goal is to have First Nations and *Metis* peoples actively participate in the planning and management of the school program (Saskatchewan Education 1988:9).

Two of the strategies employed by educators are to: forge partnerships with parents, community members, First Nations and *Metis* organizations and human service agencies, and engage community members and organizations in the active participation of community school activities (ibid:11). In sum, Community Schools are designed to place a priority on the unique needs of Aboriginal students, while at the same time, foster community development and provide cross-cultural education programs within locally determined curriculum.

3.1.3 First Nations Education in Saskatchewan

First Nations and *Metis* education is a relatively new discipline in Saskatchewan. During the first half of the twentieth century, many First Nations and *Metis* communities did not have formal schooling available to them. First Nations children attended residential schools operated by religious denominations, and later on, the Federal Department of Indian Affairs operated government schools on Indian reserves.

Students were expected to integrate into the dominant Euro-Canadian culture, and in all of these schools First Nations parents and community members were restricted by law from participating in the education of their own people (Saskatchewan Professional Development Unit 1996). By 1960 First Nations and *Metis* people began to lobby for change in this regard, and those concerns were soon articulated in the

National Indian Brotherhood's 1972 paper entitled "Indian Control of Indian Education". However, until recently, few changes were realized.

In 1989 the Indian and *Metis* Education Advisory Committee (IMEAC) was established in order to continue the work initiated by the former Native Curriculum Review Committee and the previous Indian and *Metis* Curriculum Advisory Committee. IMEAC's primary function is to advise and make recommendations to Saskatchewan Education on the development, monitoring and review of the K-12 policy and program in Indian and *Metis* Education (Saskatchewan Education 1995).

IMEAC further oversees action plans targeted at addressing high drop out rates, alienation, and low academic achievement. This committee also attempts to identify emerging needs of students, and makes recommendations on how to best address these. Likewise, IMEAC provides recommendations for the involvement of the Indian and *Metis* community in education decision making (Saskatchewan Education 1995, 1996c, 1997).

Curriculum development regarding First Nations and *Metis* proceeds in a very specific manner. The development team of the IMEAC unit is responsible for supporting the integration of appropriate content and perspectives in all curriculum documents as they are being developed and implemented. Thus, IMEAC provides the framework for appropriate recommendations and implementation of First Nations and *Metis* curriculum content. In this manner, decision making is intended to be a shared and collaborative arrangement. The degree to which the arrangement is successful has yet to be fully determined (Saskatchewan Education 1997).

To summarize, a variety of infrastructures exist within the provincial public education system in Saskatchewan designed to meet the diverse social and economic needs of its students. In terms of the archaeology-based education projects under review, a good understanding of these needs are required in order to provide appropriate, respectful and meaningful programming.

CHAPTER FOUR

THE GRACE ADAM *METAWEWINIHK* ARCHAEOLOGY PROJECT

4.1 Site Location and Biophysical Environment

4.1.1 Site Location

The Grace Adam *Metawewinihk* site (FaNq-70) is located within the Pleasant Hill District of Saskatoon, Saskatchewan at 401 Avenue N. South (Figure 4.1). Its municipal land title is PV Block 10, Lot 1, situated within the municipality at 401 Avenue N South. The legal land description of the site is the North Half of Section 29, Township 36, Range 5, west of the third meridian. The site is defined by the artificial boundaries of a CPR railway track to the south and east, by a park to the west and by a paved city street to the north. The entire area is surrounded by a mesh fence along which a number of Manchurian elm trees are growing.

4.1.2 Site Environment

The city of Saskatoon lies within the Mixedgrass Prairie Ecodistrict of the Grassland Ecological region of Saskatchewan (Mitchell et al 1977; Saskatchewan Parks, Recreation and Culture 1989). This classification is in contrast to the findings described in "The Atlas of Saskatchewan" (Padbury and Acton 1969), which locates Saskatoon within the Aspen Parkland Ecological region of the province. Thus, it is likely that some aspects of both

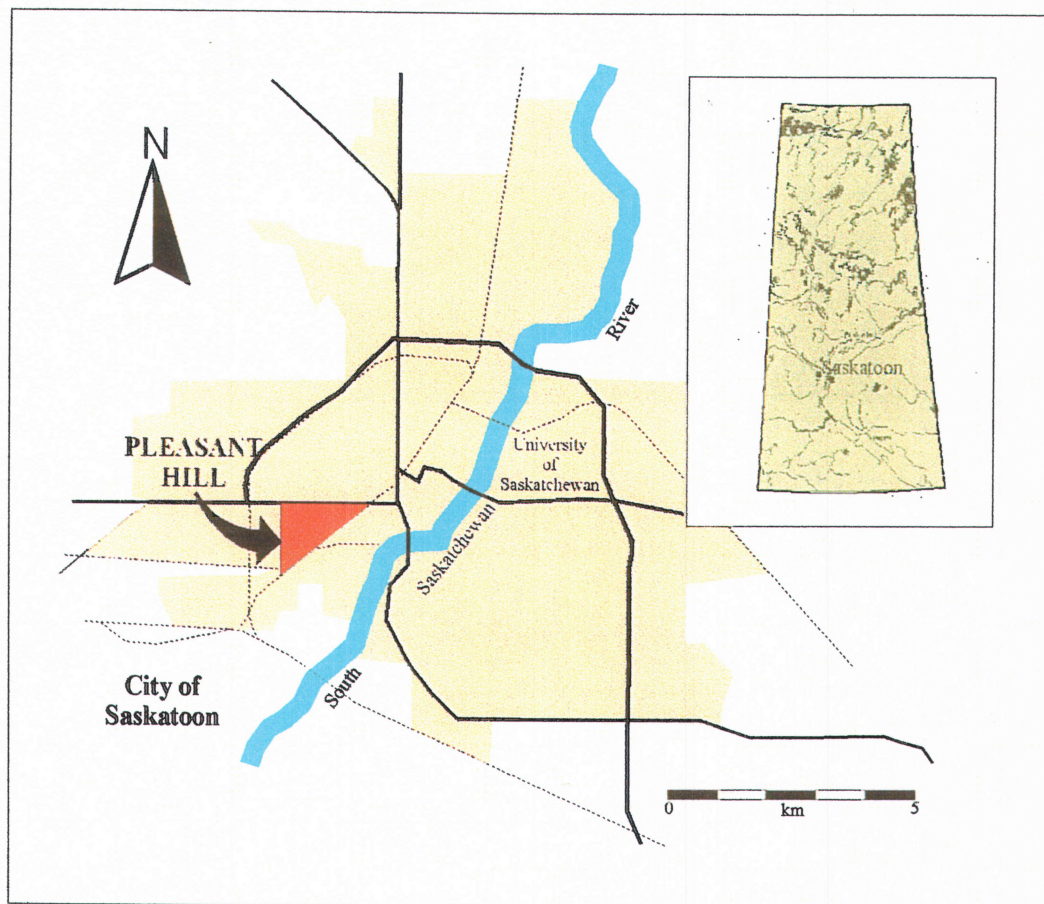


Figure 4.1 City of Saskatoon with Pleasant Hill Community Highlighted.

ecological regions are found in the Saskatoon area as it is geographically located within the Grassland/Parkland fringe (Figure 4.2).

Just as important, all three sources agree that one characteristic of this area is brown and dark brown chernozemic soils. In Saskatchewan, soils zones identified as Brown and Dark Brown are characterized by dark coloured A horizons and brownish coloured B horizons, typically underlain by light coloured (greyish) horizons of lime carbonate accumulation (Moss and Clayton 1969:72).

4.1.2.1 Climate

The climate for the area is described as both dry-warm (Saskatchewan Parks, Recreation and Culture 1989:5) and humid continental (Richards and Fung 1969:4). The latter classification is further distinguished as Cold-Forest, according to the Koeppen classification system for climate types (Chakravarti 1969:60); however this classification system is not deemed applicable to the Saskatoon area (Chakravarti 1969:52).

4.1.2.2 Regional Flora

As a transition zone between the Mixed Grassland and Aspen Parkland ecoregions, the Saskatoon area maintains a diverse range of vegetation types. Parkland vegetation includes small aspen groves in upland areas as well as willows and associated vegetation on wet and moist sites (Saskatchewan, Parks, Recreation and Culture 1989:33). Trembling aspen (*Populus tremuloides*) is identified as the dominant tree species for the Aspen Grove ecodistrict of the Parkland Ecoregion, accompanied by balsam poplar (*Populus balsamifera*), white birch (*Betula papyrifera*) and a variety of willow (*Salix sp.*) in moist areas.

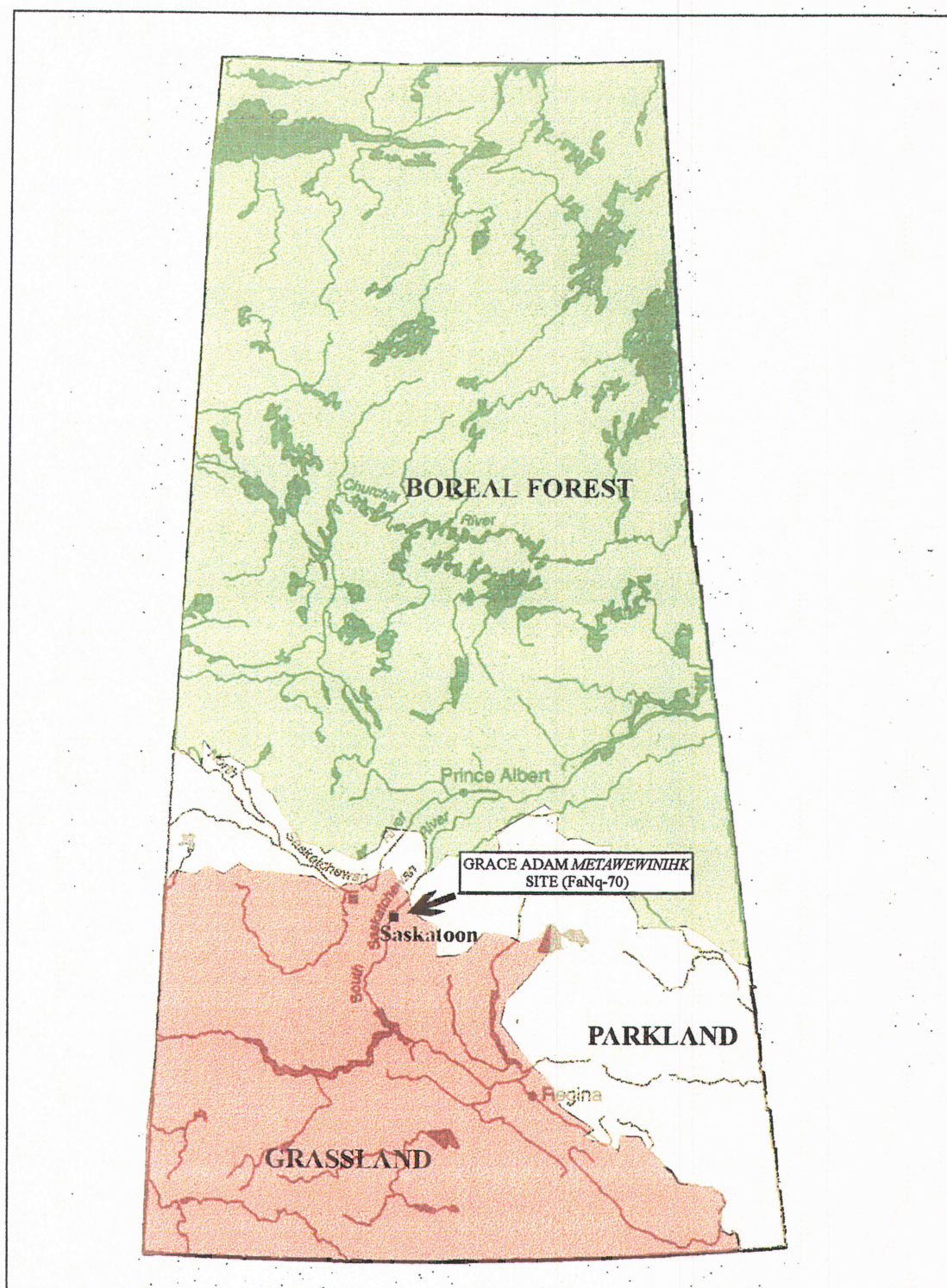


Figure 4.2 Map of Saskatchewan Identifying the Grace Adam *Metawewinik* Site (FaNq-70)

In addition, the central parklands of Saskatchewan have areas of mixed-grass prairie comprised of plains rough fescue (*Festuca halli*), western porcupine grass (*Stipa curtisetata*), timber oat grass (*Danthonia intermedia*) and Hooker's oat grass (*Helictotrichon hookeri*) (Johnson et al 1995). Other Parkland plant species include red bane berry (*Actaea rubra*) white bane berry (*Actaea alba*), purple milk vetch (*Astragalus goniatus*), prairie crocus (*Pulsatilla ludoviciana*), june grass (*Koeleria cristata*), plains cinquefoil (*Potentilla bipinnatifida*) and hairy cinquefoil (*Potentilla strigosa*).

Mixedgrass prairie vegetation consists of a variety of wheatgrasses and speargrasses, of which *Stipa comata*, *S. Spartea*, *Agropyron dasystachyum* and *A. Smithii* are dominant species in well-drained upland areas (Mitchell et al, 1977; Saskatchewan Parks, Recreation and Culture 1989). Along dry south facing slopes, low blue grama (*Bouteloua gracilis*) and sedge (*Carex filifolia*) are common vegetation types, while valleys are dominated by willow (*Salix spp.*) and wolf willow (*Elaeagnus commutata*) (ibid). Red willow was likely an important resource for making baskets used to collect berries and other available food resources.

Valleys are further populated by floral species such as Saskatoon (*Amelanchier alnifolia*), chokecherry (*Prunus virginiana*) and snowberry (*Symphoricarpos occidentalis*), wild red raspberry (*Rubus idaeus*), dewberry (*Rubus pubescens*), pin cherry (*Prunus pensylvanica*), smooth wild strawberry (*Fragaria virginiana*), prairie onion (*Allium textile*), wild licorice (*Glucyrrhiza lepiota*), western snowberry (*Symphoricarpos occidentalis*), water parsnip (*Sium suave*). Such species were likely utilized by past peoples for nutritional and medicinal purposes.

4.1.2.3 Regional Fauna

The fauna in the immediate vicinity of the Grace Adam *Metawewinik* site is markedly different from that which existed during the period prior to European contact. The plains Bison (*Bison bison bison*) was the dominant ungulate species of the grassland/parkland region, with almost every part of the bison utilized by Plains cultures. The bison provided the raw materials for food, clothing and shelter, as well as ceremonial items. Other ungulate species common to the area prior to the post-contact period include pronghorn sheep, mule deer and elk, but no longer inhabit the area (Zurburg 1991). Today the most common ungulate species is the white-tail deer (*Odocoileus virginianus*).

Carnivores which formerly inhabited this region include the wolf, swift fox, mountain lion and grizzly bear. Today, carnivores inhabiting the region include the coyote (*Canis latrans*), weasel (*Mustela sp*), striped skunk (*Mephitis mephitis*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*) and (*Mustela ermina*).

4.1.3 Site Physiography

Saskatoon is situated within the Saskatchewan Plains Region of the Central Lowlands physiographic province. This region is further divided into four groups of landscape units: The Upper Churchill Lowlands; the Saskatchewan River Lowlands; the Uplands; and, the Central Saskatchewan Plains (Richards 1969). Saskatoon is located within the latter.

A variety of physiographic features are found in the Central Saskatchewan Plains landscape unit. Along the South Saskatchewan River where it passes through the modern day city of Saskatoon, the topography is irregular as a result of modern post-glacial processes (Skwara 1988). The

area is predominantly undulating, comprised of sandy to clayey glacio-lacustrine plains (Acton and Ellis 1978). The development of the modern South Saskatchewan River occurred during the final stages of the regions most recent deglaciation which began about 12,000 years ago in this region.

4.1.3.1 Development of the South Saskatchewan River Valley

The transition from the Pleistocene Epoch to the present day Holocene Epoch is identified geologically in relation to the gradual melting of the Wisconsin ice sheet. This resulted in the current physiography of both central and south Saskatchewan (Skwara 1988:30). By analyzing glacial landforms such as ice-marginal channels, striations and glacial flutings, geologists are able to reconstruct the geological past for this region (1988:32).

Most of the present day province of Saskatchewan, with the exception of a small area located within the Cypress Hills, was covered in glacial ice by approximately 17,000 years B.P. (Skwara 1988). However, by roughly 14,000 years ago, most of the southern quarter of Saskatchewan was ice free. Frontal lakes were present in both the Regina and Saskatoon areas, known respectively as Glacial Regina Lake and Glacial Lake Saskatchewan (1988:32).

In other words, deglaciation was well under way in the province by this time. And by 12,500 years B.P. deglaciation was also taking place in the Saskatoon area. The final stages of deglaciation for the region occurred over the next 500 years, resulting in the formation of a delta in the Saskatoon area . By approximately 11,000 years B.P., the river delta became stabilized within its present day channel system (Skwara 1988:34). Thus, the geomorphology of the "parkland prairie" in the Saskatoon area, comprised

of moderately flat areas and gently rolling hills, was established by this time as well (ibid).

4.2 Project Background

4.2.1 Project Inception

In many ways, the Grace Adam *Metawewinik* Archaeology Project evolved out of the efforts of three individuals: Shirley Fedorak; Phyllis Lodoen and Laura Foley. The first two are former Archaeology graduate students at the University of Saskatchewan. Laura Foley is an elementary school Principal employed by the Saskatoon Catholic Board of Education. The project realized its first field season during the spring of 1995, under the direction of the Project Coordinator, Phyllis Lodoen. From the fall of 1995 to the fall of 1997, the writer was employed a Project Coordinator. In the spring of 1998, Jill Taylor-Hollings and Loreleen Britton were both employed as Project Coordinators at the site.

4.2.1.1. The Contribution of Shirley Fedorak to the GAM Project

In the early 1990's Shirley Fedorak decided to examine the educational relevance of archaeology as science for her master's thesis (Fedorak 1994:120). As part of her research, she spent a summer in Toronto learning about a public archaeology program run through a facility called the Archaeology Resource Centre, a program funded by Toronto's educational system. This provided important insight into archaeology-based education programming.

Ms. Fedorak also became involved with the development of an educational curriculum at Wanuskewin Heritage Park (WHP). The history of the development of WHP is important not only to the development of

S. Fedorak's thesis research, but also to the development of the Grace Adam *Metawewinihk* Archaeology Project.

Located along Tipperary Creek in the Meewasin Valley of Central Saskatchewan, WHP provides a positive example of how the co-management of cultural resources can work. The Park contains an interpretive centre, an amphitheater and numerous archaeological sites including: a medicine wheel; two buffalo jumps; a buffalo pound; stone circles or tipi rings, and buffalo rubbing stones. Although it took fourteen years from the time of its inception as a Heritage Park to opening day ceremonies in 1992, WHP demonstrates how, given appropriate time and consideration, a project of this nature can be realized.

For a number of years, the Elders involved were concerned that "white people would misconstrue the real meaning of certain things (Star Phoenix C7, June 23, 1992)". Thus, for those involved in the development of the centre, there existed a challenge to reconcile traditional Indian values with white expectations involved in the planning, interpretation and operation of a world class tourist facility (Star Phoenix C12, June 23, 1992).

And mistakes were made along the way. For example, in planning for the flow of visitors through the centre in a counter-clockwise direction, the architects overlooked an important native cultural belief — everything in Plains culture moves in a clockwise direction. Just as the sun moves through the sky, the passing of food and pipes in a tipi also occurs in a clockwise direction. Therefore, ongoing dialogue and consultation with Elders made it possible for non-Indians to ensure authenticity in all stages of development at the Park (Star Phoenix C11, June 23, 1992).

Similarly, when the Elders issued a resolution on spiritual values in 1986 stating that no written or recorded materials were to be used in the

interpretive centre without their approval, it was acknowledged that they were to be consulted on all future aspects of the interpretive programme. The Elders believe this enabled them to maintain the sacredness of their beliefs (Star Phoenix, C11, June 23, 1992).

In 1990, the Elders Committee decided they wanted an educational curriculum at WHP that would be tied into both the public and separate schools systems. They approached Dr. Ernie Walker, former Head, Department Anthropology & Archaeology, University of Saskatchewan, with their idea. In turn Dr. Walker approached S. Fedorak. A curriculum committee was struck and included four teachers. Two of these are of Aboriginal heritage — one of whom had taught in inner city schools for years.

Each time crucial stages in curriculum development were reached, Elders were consulted. And each time, the Elders approved the proposals (Shirley Fedorak, personal communication, 1994). Thus the foundation for one part of Ms. Fedorak's thesis research was provided through her involvement with the curriculum development project (Shirley Fedorak, personal communication 1994).

As a second part of her thesis research, Ms. Fedorak developed eight sequential teaching modules intended to simulate an archaeological research project. The results were published in a booklet entitled "Archaeology in the Schools" (Fedorak and Loedon 1993). It was intended that the teaching modules emphasize the Common Essential Learning identified by Saskatchewan Education (1988) as the foundations of learning (Fedorak 1994:21). In order to develop and test each of the modules, Ms. Fedorak hired an assistant, Ms. Phyllis Lodoen (Shirley Fedorak, personal communication 1994).

4.2.1.2 Contribution of Ms. Lodoen to the GAM Project

Ms. Lodoen's involvement in the "Archaeology in the Schools" (AIS) project was to become central to the involvement of University of Saskatchewan students in archaeology-based education programming in Saskatoon's inner city. At the time the education modules for the AIS projected were being developed and tested, Ms. Lodoen's son was attending St. Thomas School, where Mrs. Laura Foley was the Vice-Principal. Together, they arranged for a number of St. Thomas students to work with Ms. Lodoen at the Hartley Site during the spring of 1991.

During the 1993-1994 school year, St. Mary's Community School (SMCS) became one of the pilot schools involved in the AIS project, which Ms. Fedorak directed and Ms. Lodoen assisted. Coincidentally, Laura Foley was Principal at SMCS at that time. As a result, both Ms. Lodoen and Ms. Fedorak became members of the six person committee struck in 1993 to develop a set of goals for a "hands-on" archaeology project, should approval be received and funding provided. Ms. Fedorak soon stepped away from the GAM project to complete the requirements of her thesis program.

When the pilot activities for a project entitled "The St. Mary's Community School Archaeological Experience" were being developed by Laura Foley, Phyllis Lodoen was actively involved as Project Coordinator. The Awareness Science and Technology Program Inc. (ASTEP), provided the initial funding for this phase of what was to become the Grace Adam *Metawewinihk* Archaeology Project. Similarly, ASTEP and Industry Canada provided funding for the publication of "The Science of Archaeology — A Learning Guide" (Lodoen et al), a publication currently provided to teaching staff participating in the GAM project. This

publication, together with the "Archaeology in the Schools" publication were instrumental in the development of teaching modules for the Grace Adam *Metawewinihk* Archaeology Project.

In the spring of 1995, Ms. Lodoen invited the writer to assist her in setting up an excavation component for the GAM project, which was successfully carried out during the months of May and June. In the fall of 1995, Ms. Lodoen withdrew from the project, at which time I became the Project Coordinator. My participation in the project continued until the end of the fall session in 1997.

4.2.1.3 Contribution of Mrs. Laura Foley to the GAM Project

As both an educator and a well qualified archaeologist, Laura Foley initiated the GAM project on behalf of the Saskatoon Catholic Board of Education. When she transferred to SMCS as Principal in 1991, she took with her the idea of using archaeology as a means of incorporating archaeology into existing education curriculum (Chris Foley, Graduate Chair, Department Anthropology & Archaeology, University of Saskatchewan, personnel communication, December 17, 1999).

At that time, staff at SMCS entered into two separate discussions: The first centred around the implementation of curricular programs which would be of cultural relevance to their students. Mrs. Foley felt that archaeology was an effective way to accomplish this goal; The second focused on parcels of land near the school for community based recreational purposes took place. It was this latter discussion that eventually led to the identification of the property now designated as FaNq-70 (Figure 4.3), as an appropriate location to carry out an archaeological project (Chris Foley, personal communication, December 17, 1999).

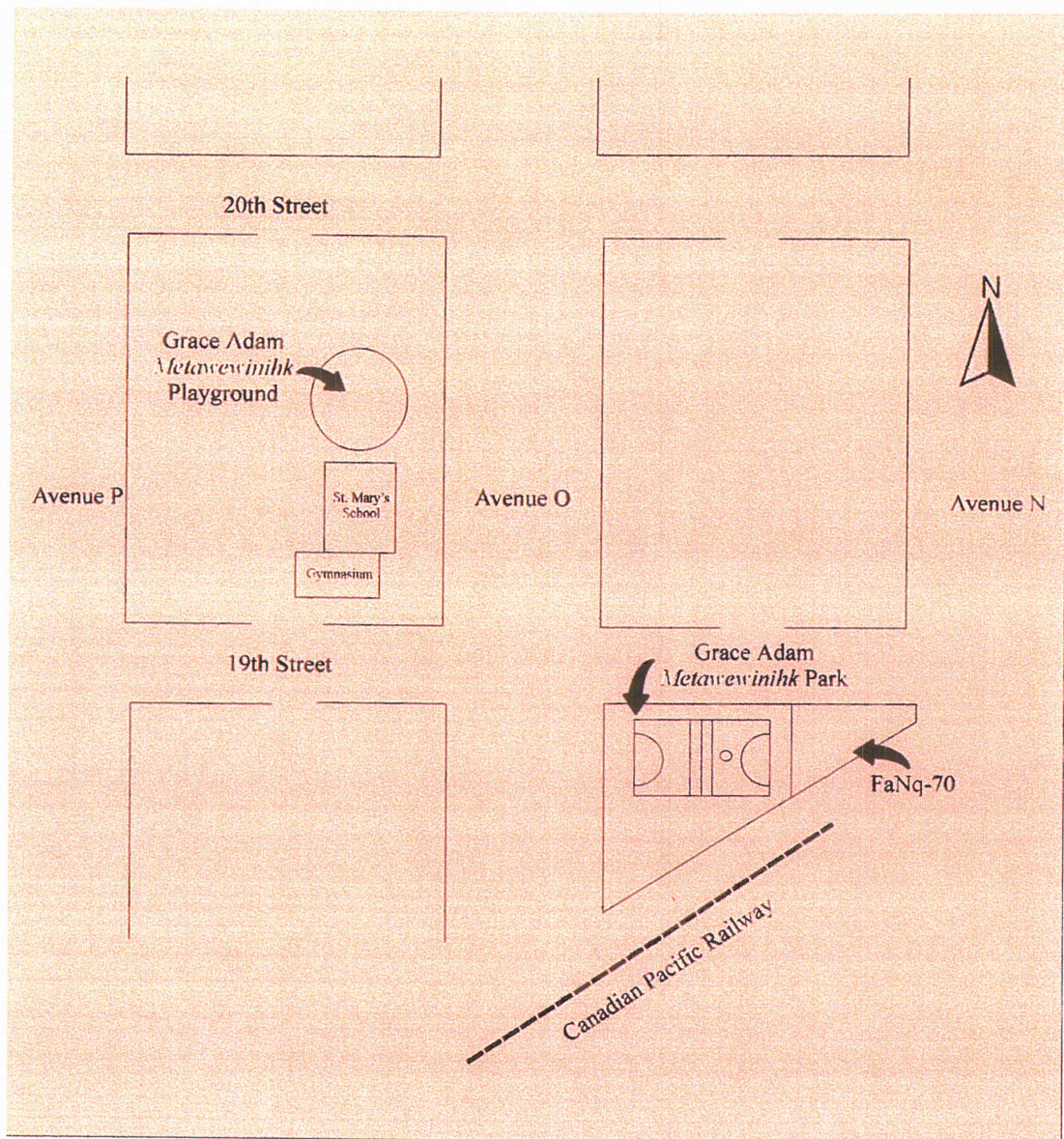


Figure 4.3 Location of the Grace Adam *Metawewinihk* Site (FaNq-70) within Saskatoon.

In 1993, Ms. Lodoen invited SMCS students to participate in the AIS pilot project. Following the 1993-94 AIS experience, and with reference to the discussions Mrs. Foley had carried out with her staff, it was decided that a more comprehensive on-going educational opportunity for the students be considered (personal communication, Phyllis Lodoen, Grace Adam *Metawewinihk* Project Coordinator, May 1995). As a result, Laura Foley drew up an initial proposal for funding and submitted it to the Saskatoon Catholic School Board Office. The Board approved the proposal and funding was provided through ASTEP for a preliminary assessment of the property and for an initial excavation scheduled for the spring of 1995.

The project was initially designed to target one Community School, St. Mary's. It was intended that funding be accessed for one season of excavation, with new funding required to catalogue the recovered materials. However, following a successful pilot excavation season in the spring of 1995, it was decided to expand the project to include two more schools: Pleasant Hill Community School (PHCS), and St. George's School (SGS).

Over the next two years, funding was accessed through a variety of sources, in addition to that generously provided by the Saskatoon Catholic Board of Education. A substantial contribution to the project was provided by the Saskatchewan Heritage Foundation for the 1996 spring and fall excavations. Additional funding for the 1996 and 1997 field seasons was provided by the Saskatoon Board of Education, the Saskatchewan Archaeological Society and the Nutana Kiwanis Society.

At the suggestion of staff from SMCS, many of whom are of Aboriginal ancestry, the site was named in memory of Grace Adams, a well- respected and dedicated First Nations educator. Thus the official name of the site

today is the Grace Adam *Metawewinihk* Archaeological Site (*Metawewinihk* meaning 'playground' in Cree) (Musser 1995).

4.2.2 Permission to Excavate the Property

Although The Grace Adam *Metawewinihk* site was not known as a bona fide archaeological site until test excavations were carried out in 1995, the initial idea to use the land for an archaeology-based educational project came about in 1991. This occurred when the first of many meetings was held between members of the Pleasant Hill Community Association, First Nations Elders, Parent Council representatives, members of the Saskatoon Catholic and Public School Boards, and staff from the City of Saskatoon's Leisure Services Department. The meeting was in response to the inner city's desire to have better and greener spaces within the Pleasant Hill Community, as determined by research undertaken by the City of Saskatoon (Musser 1995, 1996a, 1996b).

The purpose of the meeting was for city planners to receive comments from the public regarding a proposed park design in the area in response to the Department of Leisure Services research. The property in question was a three city lot block owned by the Saskatoon Catholic Board of Education. The City of Saskatoon was interested in making a deal with the School Board for the land.

The lot in question had been used as a storage site by the CPR during the early part of the 20th century and as a dump site by the School Board for over the past 40 years. Hence during the time of negotiations, the property contained a great deal of abandoned school equipment and debris. In that regard it was considered by educators as an ideal site for mapping, clearing, setting out a site grid, and at some point in the future, carrying out

excavation activities. Whether or not this site contained a real archaeological site was not an issue; however, having a place to carry out an educational project was a primary concern of the educators (Musser 1996a:4).

The topic of utilizing the property for an archaeology project was not formally tabled for discussion until late in 1992 (Musser 1995). Permission to utilize the property for educational purposes was received in April of 1993 when the Catholic Board of Education sold all three city lots to the City of Saskatoon. Two of the three lots were developed into a city park while the third lot was left unaltered with the agreement that the lot be used in the development of an archaeology project for elementary aged school children (Musser 1995, 1996a, 1996b).

4.2.3 Project Objectives

The Grace Adam *Metawewinihk* Archaeological Project is designed to provide an actual archaeological experience for grade 7 and 8 students for six weeks each spring and fall in the City of Saskatoon. The goals of the project are numerous, diverse and require that special attention be paid to the type of community in which the project is conducted (Musser 1998; Saskatchewan Education 1996)). Of particular interest in this regard is the fact that over 95% of the students enrolled in PHCS and SMCS are of either First Nations or *Metis* cultures (Musser 1995, 1996a, 1996b). Similarly, approximately 50% of the teaching staff at SMCS is Aboriginal (the term Aboriginal includes both First Nations and *Metis* cultures), while a slightly lower percentage is the case at PH (ibid).

In the fall of 1992, in anticipation that the project receive approval, a project committee comprised of graduate students from the University of Saskatchewan, and members of the Saskatoon Catholic and Public School Boards was struck. They proposed a number of objectives designed to facilitate the development of an archaeology program taking into account the community environment to which the participating students belong.

Specifically stated those objective are: 1) to introduce students to the science of archaeology; 2) to establish within the fenced boundaries of the negotiated property, an actual archaeological field experience for students; 3) to introduce students to a variety of professional individuals associated with archaeological research, such as surveyors, archaeologists, biologists and photographers; 4) to involve students, staff and the wider community in the project in order to foster pride in native culture as well as provide positive cross-cultural experiences for non-Aboriginal students; 5) to evaluate the project by publishing the results of the field experience; 6) to incorporate archaeology into the core curriculum with an emphasis on the scientific methods inherent in the discipline; and, 7) to teach archaeology from a multi-disciplinary perspective in order to enhance a variety of subject areas such as science and social studies (Musser 1995, 1996a, 1996b, 1998).

Moreover, given that the majority culture of St. Mary's and Pleasant Hill Community Schools is Cree, the objectives further complement the core area commitment to cultural activities. That commitment is: 1) to provide an environment that celebrates the majority culture of the school — Plains Cree; 2) to promote the use of the Cree language; 3) to encourage First Nations classroom themes; 4) to encourage Elder visits, counselling

and leadership in sharing circles; and, 5 to encourage visits by all First Nations and Metis people at any time.

Similarly, as the project developed and took shape it further facilitated the Community School mandate to establish links between its schools and the wider community. Thus by involving project volunteers from the University of Saskatchewan, the Saskatchewan Archaeological Society, and the Saskatoon Archaeological Society, and by involving students in activities at Wanuskewin Heritage Park, the mandate was one easily fulfilled. In sum, the approach taken by committee members, project staff and volunteers was to incorporate both Aboriginal and non-Aboriginal world views and cultures in educating students.

4.3 Educational Development at FaNq-70

4.3.1 Introduction

Following the pilot excavation season, the expansion of the project to include three schools, plus the challenge to incorporate comprehensive field and classroom components into the overall goals of the project required the development of specific lesson plan summaries (Musser 1998). A total of eight lesson plan summaries (Appendix A) have been developed which encompass three teaching modules. The provincial Science Curriculum Guideline for the Middle Level (Saskatchewan Education, Training and Employment 1993), "Understanding Common Essential Learnings" (Saskatchewan Education 1988) and "The Science of Archaeology — A Learning Guide" (1994) were invaluable references in developing both the summaries and the modules.

The teaching modules are divided into "pre-site", "on-site" and "post site" activity categories. Together they provide students with a complete

archaeological experience through their participation in a hands-on, active learning environment. The students recover, record and to some extent, analyze the material remains from FaNq-70.

4.3.2 Pre-Site Activity Module

Activities within the "pre-site" activity module include two categories: site history, and, student preparation for the on-site experience. The site history details both the background research and pilot excavation activities conducted at the site in the spring of 1995. Preparation for the on-site experience involves several classroom activities designed to familiarize students not only with the basic terms and concepts associated with the discipline, but also to introduce them to some of the basic field equipment and methods utilized on-site.

4.3.2.1 Site History - Background Research

In the spring of 1994, at the same time that the city was excavating an irrigation trench for the Grace Adam *Metawewinihk* Park, a Saskatchewan Archaeological Resource Record was submitted to the Saskatchewan Heritage Branch. Although three 1m X 1m cement foundation blocks were identified in the northwest corner of the site, it was deemed to have little if any post-contact significance, with some potential for pre-contact materials. The Heritage Branch was informed of the project at hand and advised committee members that educational excavation activities could proceed at the "site", but an Archaeological Resource Investigation Permit was not required (Musser 1996a:9).

During May of 1995, in preparation for a pilot season of excavation activities by students from SMCS, a survey of the site was carried out by the author and a faculty member from the Department of Anthropology and

Archaeology, University of Saskatchewan. A 1m x 1m grid was set out and a site datum selected (100N 100E).

Student involvement at this stage of the project involved the mapping and subsequent clearing of debris from the site in preparation for the pilot excavation component. In addition, two students from SMCS accompanied the author to the Saskatoon Land Titles Office in order to determine the Land Title history for 401 Avenue N South. A detailed history prepared by the students is provided in Table 4.1.

4.3.2.2 Site History - Pilot Excavation - Spring 1995

In preparation for student participation at the site in May and June of 1995, a 2m x 2m area was cleared, measured out, and further divided into four 1m x 1m excavation units. Students were scheduled to excavate at the site over a two hour period, two to three times per week, weather permitting. Using basic field equipment including trowels, brushes, dustpans, and pails, students learned the rudiments of field excavation. They learned to excavate arbitrary 10 cm. levels within discrete quadrants of their assigned units. All soils and materials were screened through a 1/4" mesh screen. Students were provided with a daily log form, level record forms and artifact cards in order to record information.

No "pre-site" preparation was provided the students for the pilot component of this project. All instruction took place on-site. On the second to last day of excavation an important discovery was made at 7 cm DBD — a quartzite bifacial thinning flake was recovered. This was a significant find for participating Aboriginal students because it provided them with a link to their cultural past right in the midst of their own community (Musser

Table 4.1 - Land Title History at 401 Avenue N South, Saskatoon

November 16, 1906

- 80 acres of land granted by King Edward VII to a group of businessmen

May 4, 1907

- Legal title was listed to the same businessmen. Plans for subdivision of the land was approved

May 22, 1907

- CPR given separate title to the land passing by site and parkland

August 13, 1912

- Some lots sold, but not site or parkland, still owned by businessmen

February 3, 1913

- Title of the remaining land, including site and parkland, listed as property of The Manitoba Loan Company of Winnipeg, Manitoba

1913 - 1924

- Some of the lots were sold, but not the site or parkland. Those remaining listed as belonging to the City of Saskatoon in 1924.

August 3, 1927

- Remaining lots, including site and parkland sold to A.H. Hanson and Co. Ltd. of the City of Saskatoon and the Province of Saskatchewan

October 22, 1936

- Site, parkland and several other lots property of City of Saskatoon

August 23, 1955

- The site and parkland were purchased by St. Paul's Roman Catholic Separate School District No. 20 in the Province of Saskatchewan

March 11, 1971

- Title identified as St. Paul's Roman Catholic Separate School District No. 20, Saskatchewan

January 7, 1982

- Title identified as St. Paul's Roman Catholic Separate School Division No. 20 of Saskatchewan.

May 1994

- A land exchange between the Board of Education and the City of Saskatoon occurred.

1995, 1996a, 1996b). Thus it was realized that a more comprehensive understanding of the resource potential of the site was required.

To that end, a permit application was submitted to the Saskatchewan Heritage Branch. In turn a Borden Number (FaNq-70) and a permit number were issued in order to allow test excavations and controlled data collection to be carried out. Since an expansion of the project was planned to include two more schools for the 1995 fall season, it was decided to involve participating students in the assessment phase as well as continued excavation activities.

4.3.2.3 Student Preparation for On-Site Activities

Following the pilot excavation component, project staff determined the necessity to prepare students prior to their first site visitation. The objective here is not only to introduce students to the terms and concepts associated with the discipline of archaeology, but also to provide some background regarding what a site looks like, how a site is formed, how an excavation grid is set out, as well as what types of equipment are utilized in the field (Musser 1998:7). In other words, this component of the module prepares students for a hands-on field experience. Three distinct lesson plans are carried out in order to facilitate those objectives.

The first lesson plan, entitled "Build-a-Site" is conducted within a classroom setting. This activity is similar to the ones described by Fedorak (1994) and Lodoen et al (1994). Students are required to determine the daily needs of an ancient Plains cultural group, what elements of a landscape would best meet those needs, and in which areas of a landscape certain activities might occur. By using artifacts on loan from the University of Saskatchewan, students could excavate a site, complete with a small

butchering area, a food processing area, stone tool and pottery production areas, fire hearths and a campsite. Once covered over with soil, students utilize basic field equipment to excavate the site and subsequently screen the recovered materials through a 1/4" mesh screen.

A second lesson plan entitled "Drafting Research Questions" is also conducted in the classroom, following the successful execution of the Build-a-Site plan. Students are encouraged to consider the former activity and work as a group to develop a set of research questions. The objective here is not to formulate "good" research questions, but rather to teach students that all research questions are worthy of consideration, regardless of their ambitious nature (Musser 1995).

The final lesson plan in this module, entitled "Setting Out a Site Grid" is again carried out within a classroom setting. This is an important activity in terms of reinforcing the scientific nature of archaeological research — it requires students to use a compass and tape, make accurate measurements, and triangulate 1m x 1m units. Moreover, this lesson plan provides project staff the opportunity to share with students the importance of accurate record keeping. In summary, the lessons plans included in the Pre-Site Activity Module play an important role in preparing students for the "real life" field component of the project.

4.3.3 On-Site Activity Module

Activities within this teaching module fall into two categories: site blessing and celebration activities and controlled data collection activities. A third on-site category is site testing and assessment. Since the one-time only assessment phase was carried out in conjunction with the opening ceremonies in the fall of 1995, it is not considered an on-going part of this

module. However, since testing did take place on site, the results of the assessment are provided in section 4.3.3.3 of this chapter, with an indepth analysis of the sedimentary history of the site provided by a project volunteer (MacNeil 1985).

Within the site blessing and celebration category, two distinct types of site openings were conducted in 1995, 1996 and 1997— one prior to site activities each spring, one prior to site activities each fall. The fall activity is entitled "Blessing and Sharing", while the spring activity is entitled "An Archaeology Day in the Park". Controlled data collection involves the excavation of materials from the site by participating grade 7 and 8 students for six weeks each spring and fall.

4.3.3.1 Blessing and Sharing

First Nations involvement with the excavation component at the Grace Adam Metawewinihk site began in 1995 as a direct result of the recovery of pre-contact lithics at the site. This occurred for two reasons. The first is in reference to the Canadian Archaeological Association's (CAA) "Statement of Principles for Ethical Conduct Pertaining to Aboriginal Peoples". Within that document, members of the Association agree to abide by a list of principles. With regard to the project under review, three principles in particular stand out: 1) to recognize and respect the role of Aboriginal communities in matters relating to their heritage; 2) to support formal training programs in archaeology for Aboriginal people; and 3) to communicate the results of archaeological investigations to communities in a timely and accessible manner.

With the expansion of the program in the fall of 1995, approximately 55 students of Aboriginal ancestry were scheduled to participate in the

program. In as much as many Elders and First Nations peoples continue to maintain traditional practices such as respect for Mother Earth (CAA 1996:13), project staff felt that an Elder should be invited to provide a blessing at the site prior to excavation activities, and at the same time, share some thoughts on appropriate respect for the earth with participating students.

The second reason for Elder participation at the site is in reference to the Community Schools Policy and Conceptual Framework (Saskatchewan Education 1996). Within that framework, one of the goals is to enhance the participation in and management of public education by Indian and *Metis* people (1996:6). Therefore it was deemed a logical step in the progression of project development to invite a First Nations Elder to participate in the opening ceremonies at the site.

Therefore, each fall the opening ceremony prior to the commencement of on-site activities begins with an Elders blessing and sharing. This is followed by a Round Dance led by the St. Mary's Oskayik Song and Drum Troupe. The Drum Troupe is led by a First Nations teacher from SMCS and consists of interested students and teaching staff from the school. While the overall message from the Aboriginal community might not be new to many of the students from SMCS and PHCS, it is considered an excellent cross-cultural learning opportunity for the non-Aboriginal students from SGS. Moreover, it reinforces a connection between the project and its First Nations host community.

4.3.3.2 An Archaeology Day in the Park

In response to positive feedback from educators regarding the project's expansion, it was decided to provide a celebratory experience for

participating students, volunteers and project staff in the spring of 1996. To that end invitations were sent out to senior staff from both school boards, city officials, the media, faculty members from the University of Saskatchewan, and members of both the Saskatoon and Saskatchewan Archaeological Societies.

The "Day in the Park" celebration is comprised of two components: an Elders blessing and sharing, and a half-day of hands-on activities for the students regarding the day-to-day activities carried out by First Nations peoples prior to European contact. The latter provides students the opportunity to try their hand at pottery making, pre-contact cooking methods, atlatl throwing, petroglyph making, flintknapping, fire-starting and Aboriginal crafts. As a result of these activities, two fire pits and a boiling pit have been "added" to the landscape at FaNq-70.

Similar to the fall celebration, the SMCS Oskayik Song and Drum Troupe provides entertainment and leads a Round Dance at the "Day in the Park." For the 1996 ceremony, community members also carried out a tipi raising at dawn in the Grace Adam *Metawewinihk* Park, providing a distinctive First Nations cultural background for the celebration.

Both the spring and fall ceremonies are considered extremely important activities for several reasons: 1) it provides a leadership role for First Nations Elders in relation to the project; 2) it promotes a cross-cultural sharing opportunity for all persons involved in the project; and, 3) it provides the opportunity for interaction between students from all three participating schools.

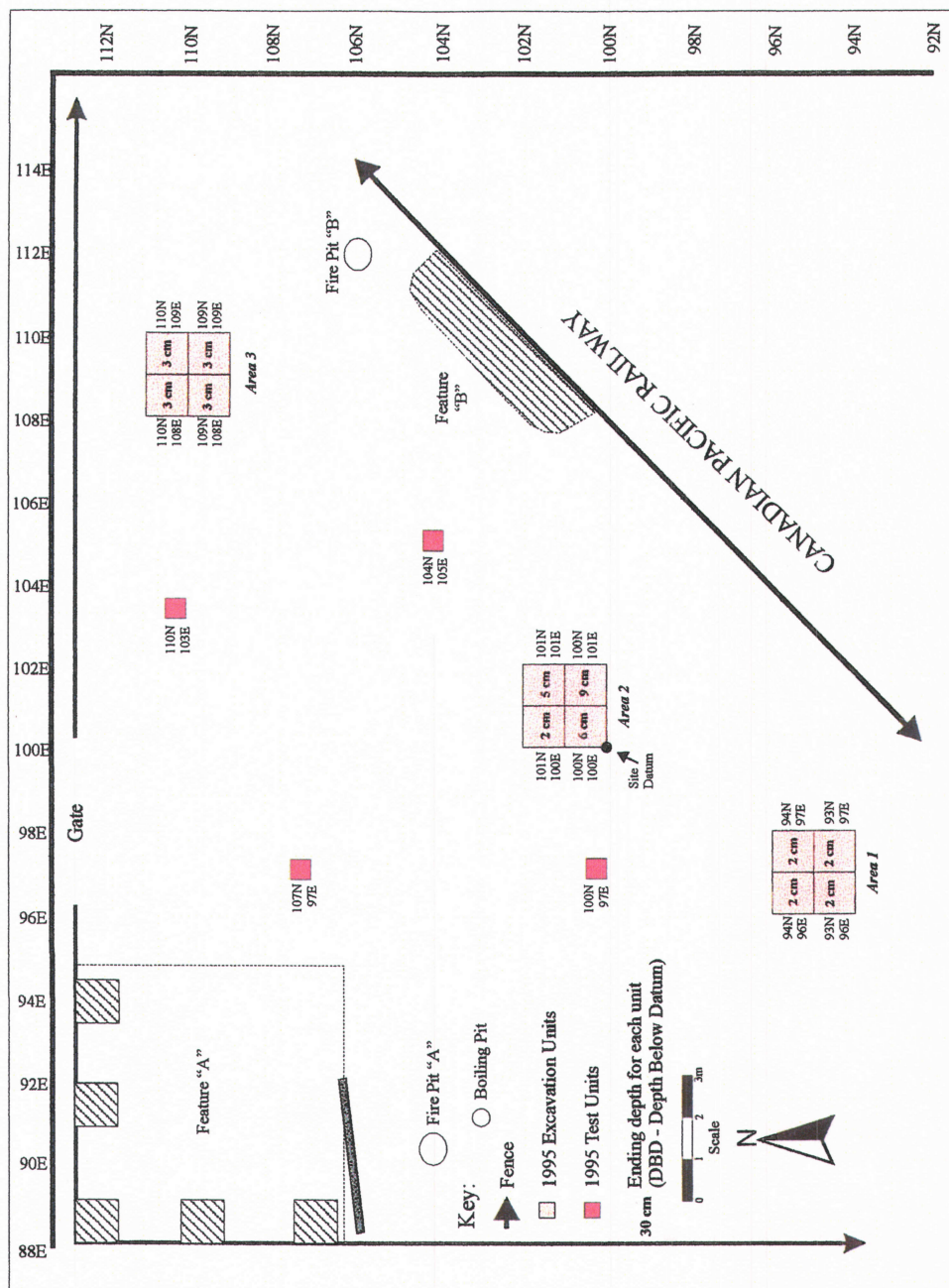


Figure 4.4 1995 Test Units, Identified Features and Excavation Units Indicating their Respective Depths

4.3.3.3 Site Assessment and Test Unit Analysis

The site assessment was conducted in the Fall of 1995 in conjunction with project expansion. Following the opening ceremonies comprised of a blessing by First Nations Elder, Maria Linklater and a round dance led by the St. Mary's Oskayik Song and Drum Troupe, eight elementary school students volunteered to assist University of Saskatchewan project volunteers in test excavations. Four 50 cm x 50 cm units were excavated to between 45 and 60 cm below surface in 10 cm arbitrary levels (Musser 1996a). These units were located in the SW quadrants of units 100N 97E, 104N 105E, 107N 97E and 110N 103E (Figure 4.4).

A project report regarding the stratigraphic analysis and depositional history of the site was provided by a project volunteer (MacNeil 1995). The results were based on observations and soils samples taken from each of the test units. As a result, five sedimentary levels are identified for the site, each of which has specific defining characteristics. Two of the identified sedimentary levels are actual soils rich in organic materials and composed of fine silts (Levels I and V), while the other three are fluvial deposits (Levels II, III and IV). Included in the sedimentary levels are an A Horizon soil; a light yellow sandy silt layer; a light brown sandy silt layer; a coarse pebbly layer; and, a final layer of sod (MacNeil 1995).

4.3.3.3A Sediment Analysis

Level I - Sod Level

The sod level is approximately 5 - 10 cm. thick. Sediments from this level are highly contaminated with microscopic metallic dust, possibly from welding or other tasks related to scrap metal (MacNeil 1995:2). It was

observed under a stereoscopic microscope that by using a metal pointer, black flecks moved in random directions as they were repelled by the magnetic forces of the pointer. The sediments themselves are moderately sorted, with fine grains having an average size of 0.17mm. Quartz is the dominant material, although biotite is also present in small amounts (MacNeil 1995:3). The sediments in this level are classified as 10YR/4/2 using a Munsell Colour Chart.

Level II - Pebbly Stratum

Level II is approximately 2 - 5 cm. thick. MacNeil (1995:2) suggests this level is unique as it is present in one of the four test units, 104N 105E, and subtly present in the others. It consists of poorly sorted materials ranging from fine sand grains (average=0.9mm) and coarse grained sands (average=1.75mm) to larger pebbles measuring as much as 10 mm. in diameter. This level is also comprised mainly of quartz, but it also contains the mineral muscovite in about 1% composition as well (MacNeil 1995:2)).

Level III - Light Brown Sandy Silt

This level indicates moderate sorting of greyish grains containing approximately an 80% quartz composition. It ranges in thickness from 4 to 15 cm. Root fragments are visible under a stereoscopic microscope but not visible in the field (MacNeil 1995:2). With an average grain size of 0.16 mm, some larger grains are present in minimal amount measuring up to 1.1 mm in size (MacNeil 1995:2). These sediments are classified as 10YR/3/4.

Level IV - Light Yellow Sandy Silt

This level is the thickest of all levels, ranging from 15 - 35 cm. Analysis of sediments from this level indicate that they were fluvially deposited, which is typical of riverine environments. The grains are well sorted, containing an 80 - 85% quartz composition, which MacNeil (1995:1) reports

is "clean" in appearance and lacks any preserved organic material. The grains average 0.2 mm in diameter, with the colour of the sediment classified as 10YR/5/5.

Level V - A Horizon

This level is comprised of well sorted sediments of approximately 90% quartz composition with an average grain size of 0.16 mm. The grains appear "muddy" according to MacNeil (1995:1) and are covered with a fine silty material in which plant materials have been preserved. Thus Level V constitutes a true soil with a high organic content and is a potential archaeological level (MacNeil 1995:1). The sediments in this level are classified as 10YR/2/3.

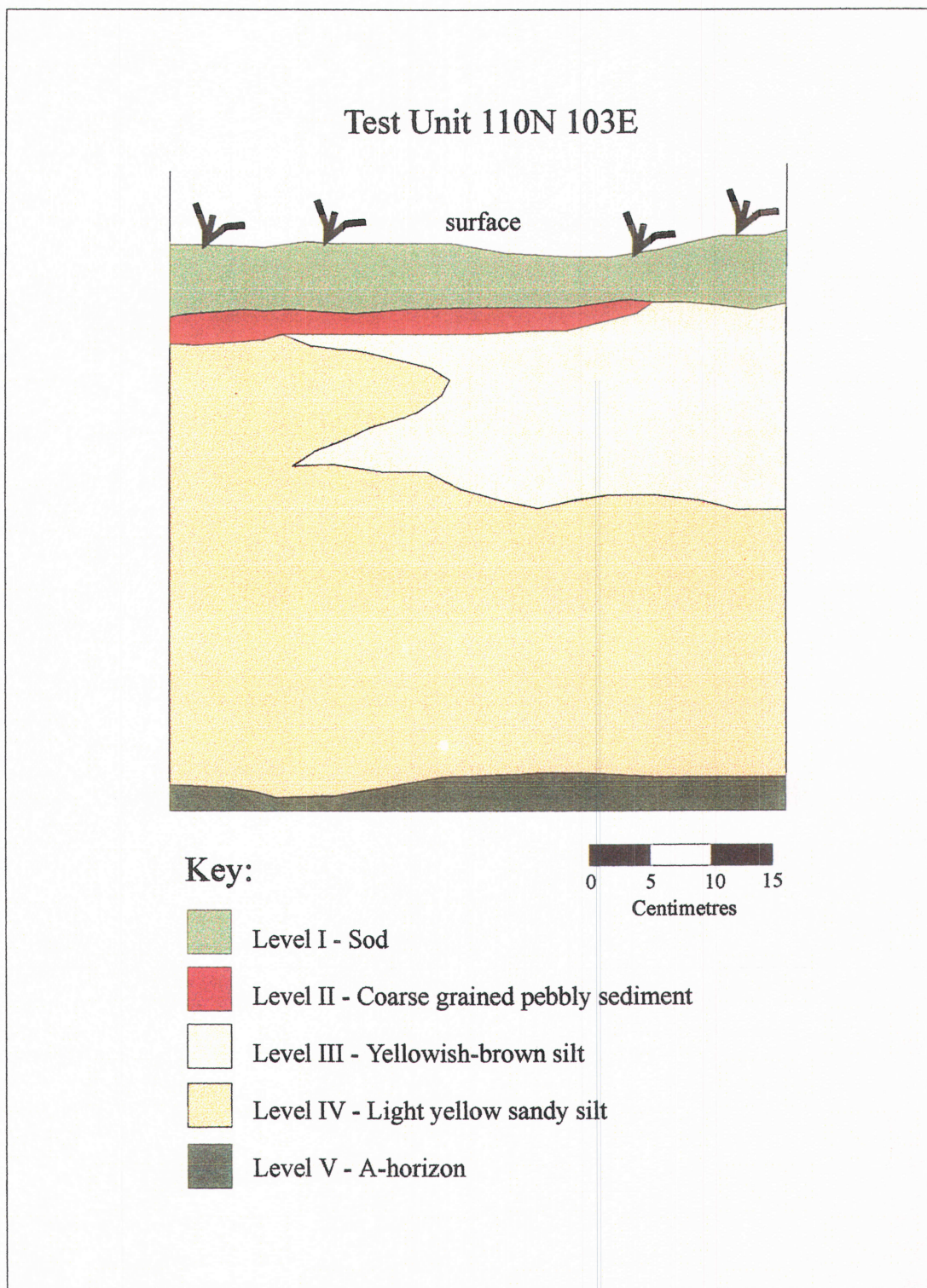
4.3.3.3B Interpretation of Test Unit Integrity

Test Unit 110N 103E

Furthest north of all the test pits, this unit is undisturbed and contains all five stratigraphic levels in their original context (Figure 4.5). The sod level is the only level in this unit that indicates a metallic content and small burrows present in the north wall were likely created by earthworms (MacNeil 1995:4). Both the north and west walls of this test unit have an interesting sedimentary structure known as a "flame structure". Best described as "tongue-like protuberances" of sediments into overlying soft sediments, these structures are considered to be deformation structures which were formed as Level III was deposited over Level IV (MacNeil 1995:4).

Test Unit 107N 97E

This test unit was excavated, profiled and backfilled prior to MacNeil's involvement at this site. However, the interpretation from the profile



**Figure 4.5 West Wall Profile Drawing of Test Unit 110N 103E
Grace Adam *Metawewinihk* Site (FaNq-70)**

(Figure 4.6) leads him to suggest this area is possibly undisturbed due to two supporting observations: 1) A number of stratigraphic levels were recorded and had the unit been disturbed, they would have been mixed and not recognizable; and, 2) directly below the sod level, the pebbly stratum is present where it is expected to be, rather than mixed with other sediments (MacNeil 1995:5).

Test Unit 104N 105E

Like the previous test unit, MacNeil's analysis is based solely on the profile diagram. However, he reports this area is heavily disturbed for two reasons: 1) the A Horizon (Level V) in the west wall (Figure 4.7) is bisected by a dark brown silty layer which should not occur in an undisturbed context; and, 2) in the north wall the A Horizon is highly irregular which is not typical of a sediment layer that has been eroded (MacNeil 1995:6). Of the four test units excavated, this unit is closest to the railway tracks and represents an area that has been heavily disturbed (MacNeil 1995:6).

Test Unit 100N 97E

This unit was directly observed and sampled by the author of the sedimentary report who indicates this unit is also heavily disturbed (Figure 4.8). This unit is closest to the area where the cement foundation blocks were identified prior to site activities. The majority of the matrix in this unit is composed of one layer, which is actually a mixture of Levels III and IV. MacNeil (1995:6) asserts that the mixing was caused by human activity, which is supported by the sediment samples containing metallic dust from far below the sod level. Moreover, MacNeil reports that the recovery of molten metallic droplets at 50 cm DBS were likely the result of spatter from welding, and while very tiny in size, they can be easily isolated using a microscope.

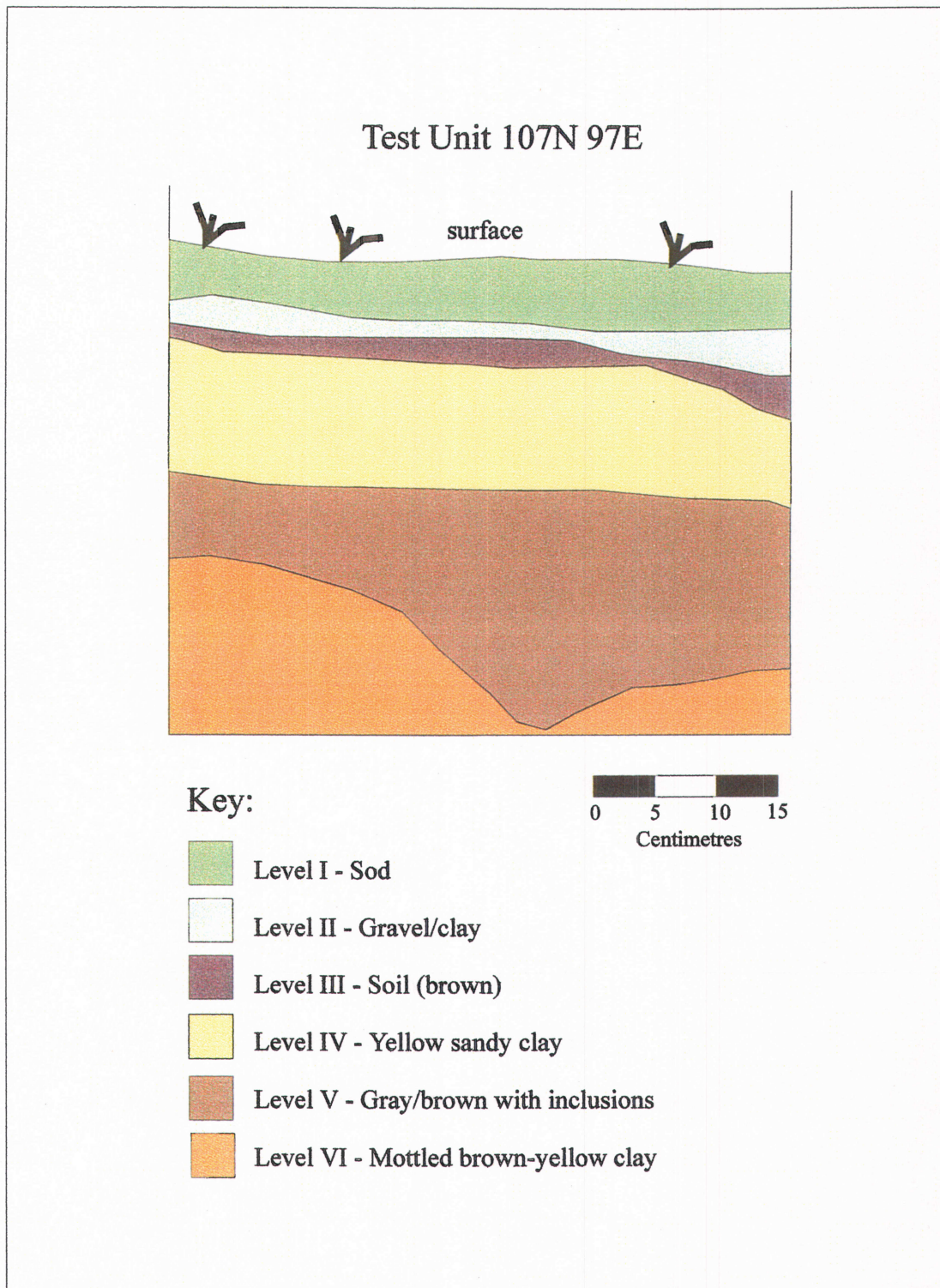
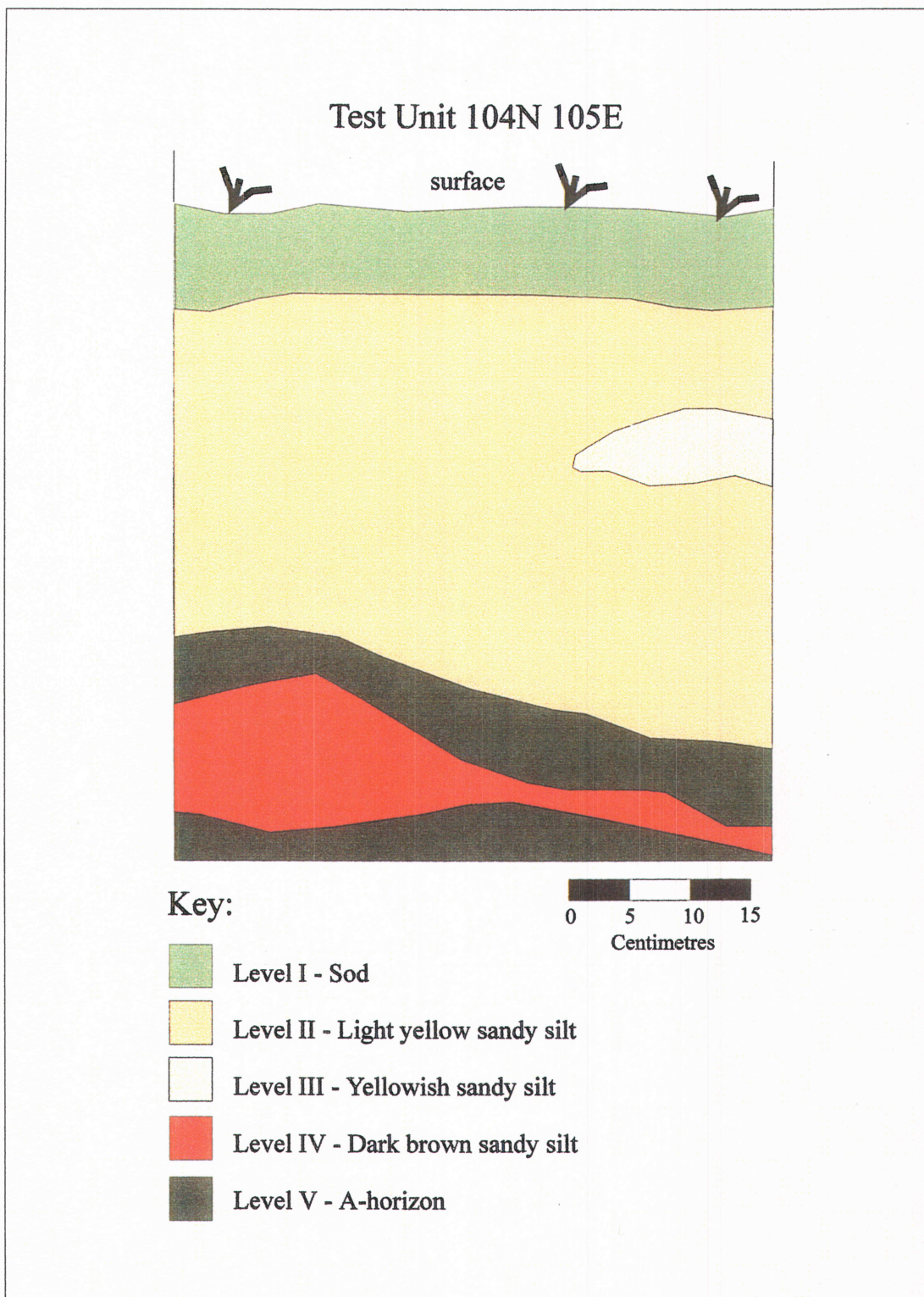
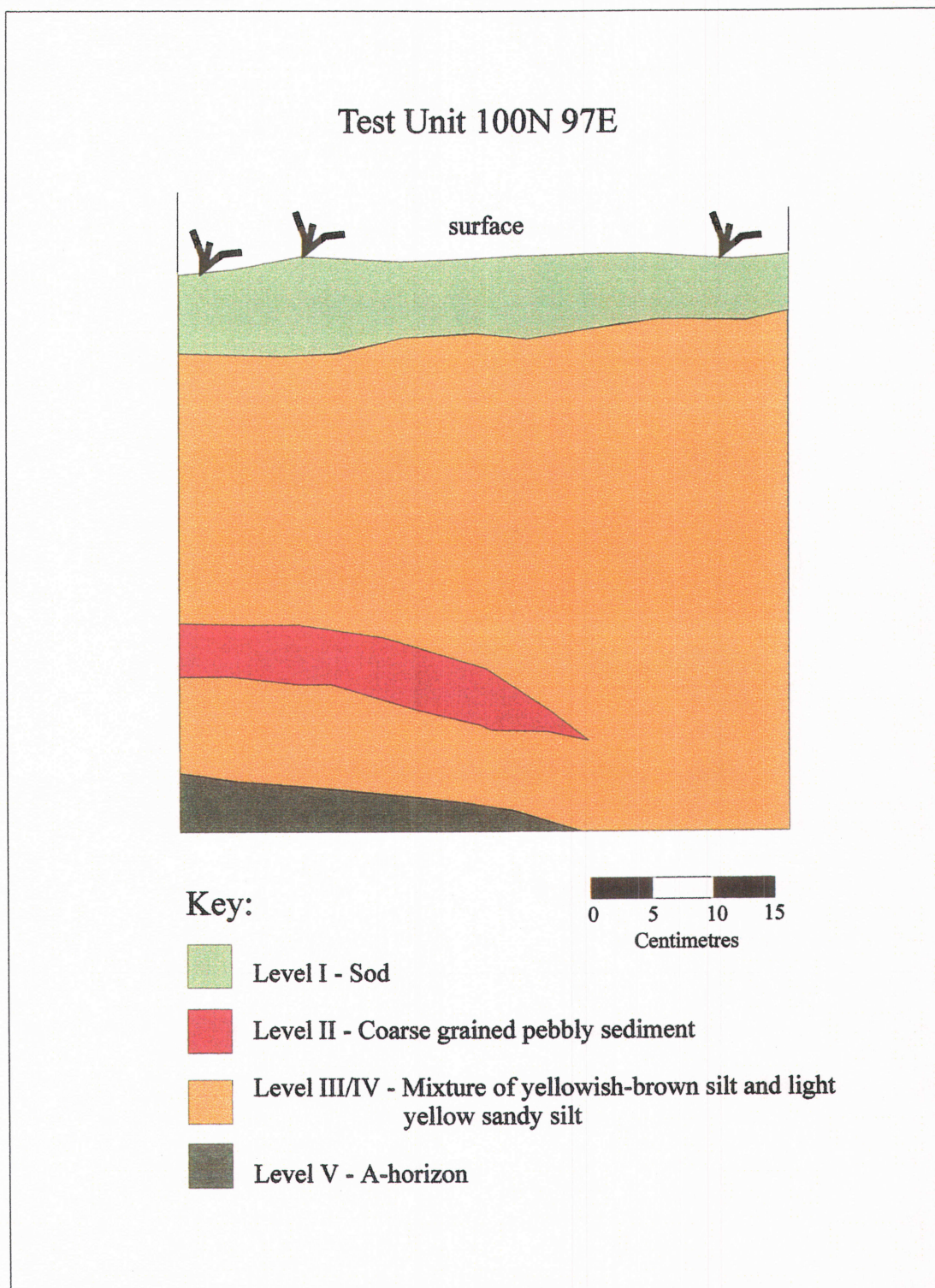


Figure 4.6 West Wall Profile Drawing of Test Unit 107N 97E
Grace Adam *Metawewinihk* Site (FaNq-70)



**Figure 4.7 West Wall Profile Drawing of Test Unit 104N 105E
Grace Adam *Metawewinihk* Site (FaNq-70)**



**Figure 4.8 West Wall Profile Drawing of Test Unit 100N 97E
Grace Adam *Metawewinihk* Site (FaNq-70)**

4.3.3.3C Interpretation of Sedimentary History at FaNq-70

MacNeil (1995) states that Horizon A is a buried and heavily eroded soil. He further asserts that this erosion occurred prior to the fluvial deposition of levels II, III and IV. He considers test Unit 110N 103E important in terms of indicating how these layers relate to each other in an undisturbed context. In particular, the well defined layers with sharp contacts and with the flame structure would have been obliterated if any disturbance or mixing of soils had occurred (MacNeil 1995:7). To support this claim, MacNeil provides two potential explanations of the depositional history of the site (Figure 4.9).

The first is based on the likelihood that levels II, III and IV are overbank or floodplain deposits associated with the South Saskatchewan river. In this type of a depositional environment, plane-bedded sands and laminated muds are typical deposits with coarser sediments being deposited, prior to the deposition of finer sediments. Such deposits can cover hundreds of meters in terms of area (MacNeil 1995:8). Given such a scenario, MacNeil suggests that Horizon A would have to have been developed on the surface of a floodplain deposit of fine silts and sands which eventually became home to a terrestrial ecosystem. In turn it was heavily flooded, followed by the deposition of layers IV and III, and a high energy fourth event that rapidly deposited the poorly sorted pebbly layer (MacNeil 1995:8).

A second, slightly more complicated scenario is that the entire area was once a floodplain region, with deposits resulting from a meandering fluvial system acting as part of a drainage system for the floodplain. Systems of this sort are known to create later sequences with coarse sands and gravels which form the base on tops of sands and silts, with muds

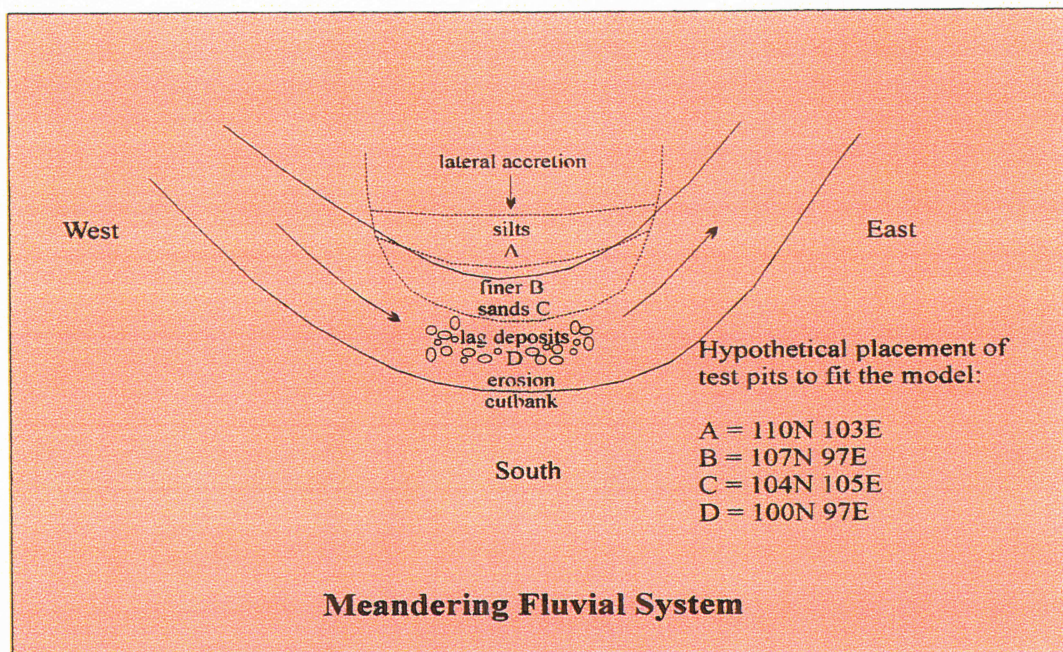
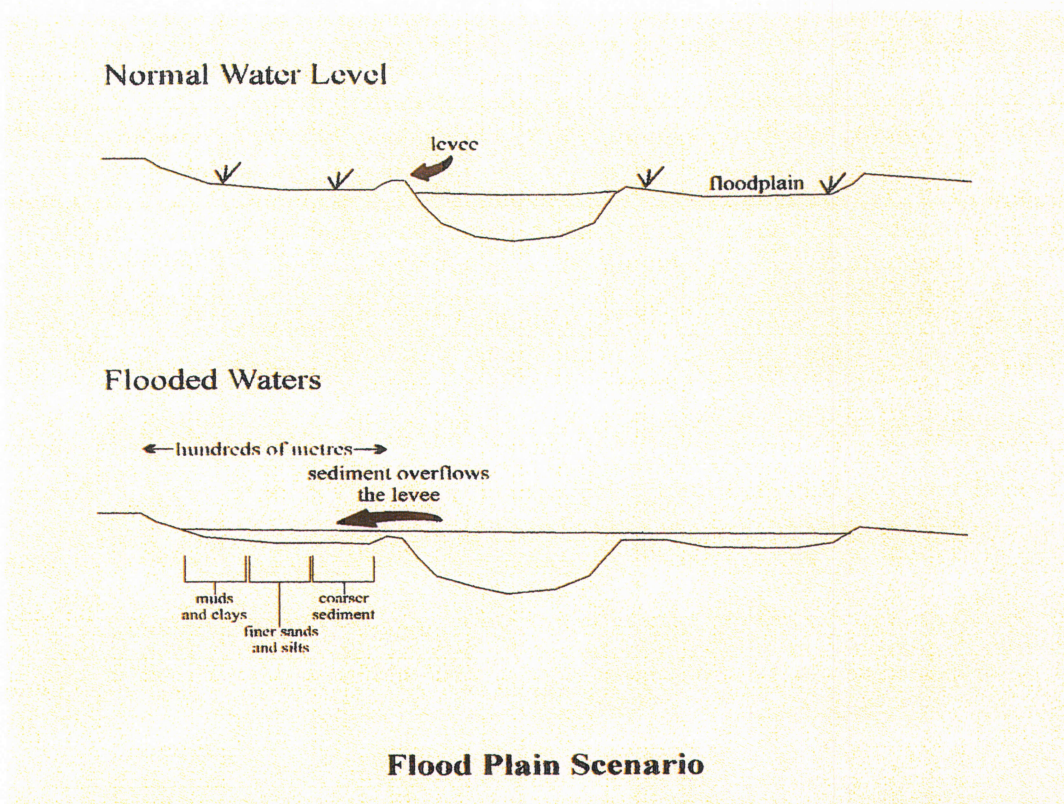


Figure 4.9 Two possible interpretations for the site depositional history at FaNq-70 (MacNeil 1995)

being laterally deposited. MacNeil (1995:8) offers this second scenario as a means to explain the pebbly level. If this were the case, he argues, then the system was likely flowing in a west-east direction with lag deposits occurring in the southern part of the site, with finer sands and silts being laterally deposited to the north (MacNeil 1995:8).

With only four test pits to analyze, specific conclusions are difficult to make. However, MacNeil (1995) argues that three specific conclusions about the site can be made as follows: 1) there are no fewer than five stratigraphic layers in the top 60 cm, two of which are soil horizons, while the others are fluvial deposits; 2) the sediments become finer in a north-eastern direction across the site, indicating the flow energy was decreasing in this direction; and 3) the area most heavily disturbed by human activity is the south-eastern region as indicated by test units 104N 105E and 100N 97E.

4.3.3.3D Analysis of the Test Unit Artifacts

A total of 97 artifacts were recovered during the testing and assessment phase of on-site activities. Of these, two were quartzite lithic flakes and eight were faunal fragments were recovered. Three unidentifiable bone fragments and one large mammal centrum fragment as well as one of the lithic flakes were recovered from level 2 of test unit 107N 97E. The remaining quartzite flake was recovered from level 1 of 110N and 103E, while the four weathered, unidentifiable faunal remains were excavated from level 2 of test unit 100N 97E.

Of the remaining 88 artifacts, all are post-contact culture remains. From level 3 of test unit 105N 105E, 21 milled wood fragments were recovered,

six of which were burnt. In addition, one red brick fragment was recovered from level 3.

Twenty-eight artifacts were recovered from test unit 107N 97E, including two brown glass fragments and one clear plastic fragment from level 1, and five wood fragments, 13 pieces of slag (burnt or melted construction material), three pieces of burnt black rubber, and four pieces of clear plastic from level 4.

Nine post-contact artifacts were recovered from Unit 100N 97E including 1 metal buckle and a construction nail from level 1; one clear glass fragment, one brown glass fragment, two nail fragments and one small fragment of yellow rubber from level 3; and, one construction nail, one nail tip, and one piece of slag from level 4.

The remaining test unit, 110N 103E produced a total of 29 post-contact artifacts. Of these 1 green glass fragment and 21 pieces of burnt black rubber were recovered from level 2. Four burned wood fragments were found in level 4, while 3 of the same were excavated from level 5.

A catalogue of artifacts covering the 1995, 1996 and 1997 field seasons was produced by site staff in the fall of 1997. However, due to the reluctance of school board staff to have artifacts leave the province, a complete artifact analysis exists only for the faunal and lithic remains. This was done with the intent to have information for the public regarding a pre-contact presence at the site. Furthermore, during the initial stages of program development, the idea was to have grade 7 and 8 students catalogue and analyze the post-contact artifacts. While this has occurred to some degree, more time needs to be assigned to this task. A complete summary of the post-contact materials recovered over the three year field component is provided in Appendix B.

4.3.3.4 Controlled Data Recovery

1995 Excavation Activities

For each six week excavation period at the site, students participate between approximately two to three hours per session. Early in the project it became apparent that excavation territory was of some concern to the students. Each group questioned whether or not other school groups would be digging in "their area". Therefore, in the fall of 1995, two additional 2m x 2m excavation areas were cleared to facilitate this concern. Hence, Areas 1, 2 and 3 were assigned to SGS, SMCS and PHCS respectively for the duration of the 1995, 1996 and 1997 field seasons.

Similarly, in the fall of 1995 the entire lot was cleared of grasses and brush at which time two separate features were identified (Figure 4.10). Although three 1m x 1m cement foundations had been identified in the northwest corner of the site prior to the pilot excavation component, two additional cement foundations were located in the same area, now identified as Feature A. Furthermore, a large railway tie is also associated with this feature.

A second feature along the fence parallel to the CPR rail line is also evident. It is comprised of a pile of bricks and some planking. This feature has never been completely cleared as the writer determined it could remain covered for future excavation activities. The intention is to ensure the feature remains undisturbed until that time.

University of Saskatchewan student volunteers and project staff work closely with students to ensure that data is properly recovered and recorded at the site. Ideally a 2:1 student to supervisor ratio is maintained, however a 3:1 ratio is necessary on occasion depending on the needs of participating schools and volunteer availability.

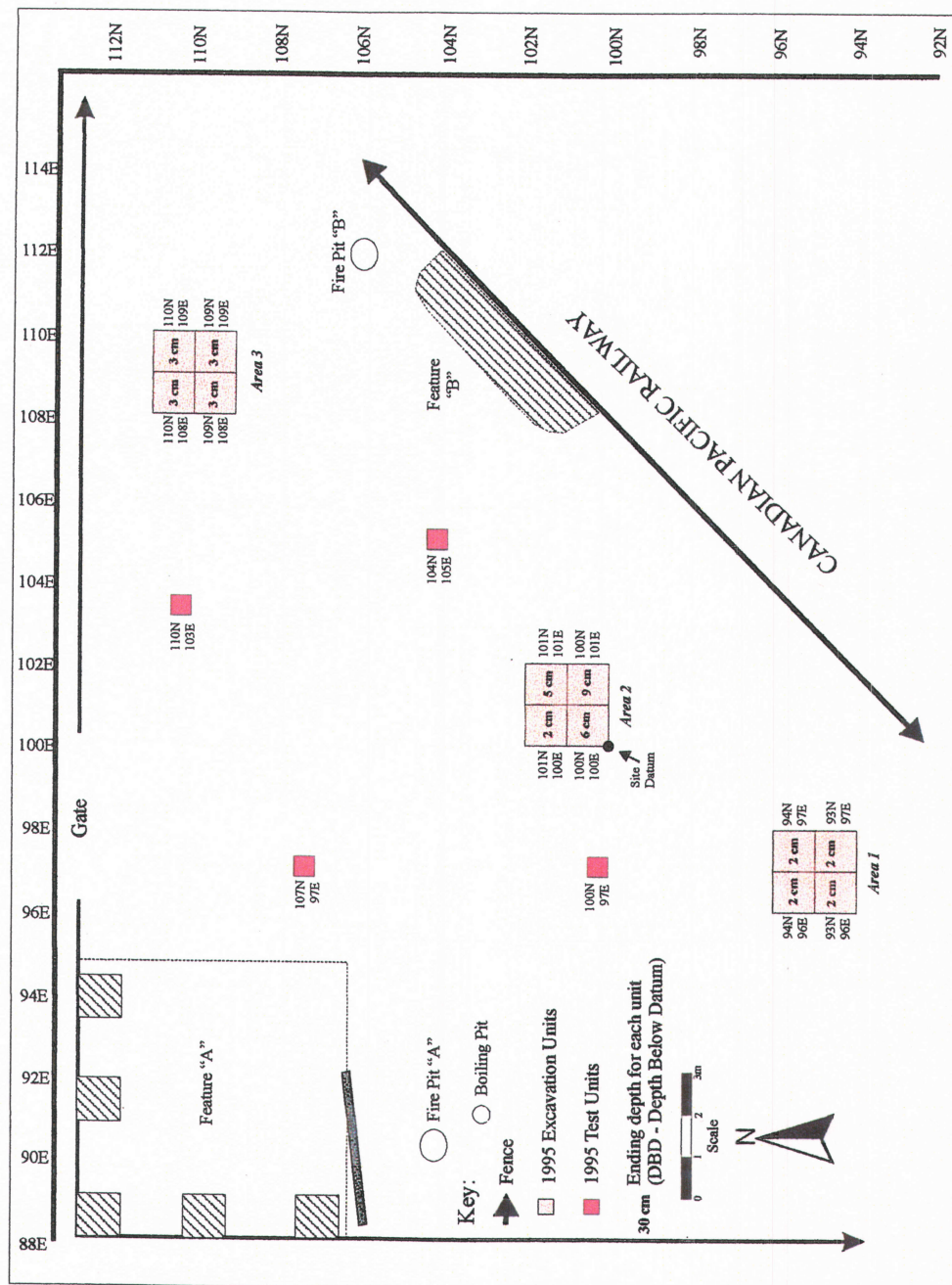


Figure 4.10 1995 Test Units, Identified Features and Excavation Units Indicating their Respective Depths

As during the pilot excavation season, students excavated in quadrants within 1m x 1m units. They trowelled in 10 cm. arbitrary levels, completing daily log forms, level record forms and planview forms as required.

Supervisory staff assisted students in taking and recording measurements and maintaining appropriate site forms. All soils were screened through a 1/4" mesh screen and bagged with an artifact card. Measurements were taken from the south-west corner of each unit, and depths were recorded as "below datum" as the site datum had been incorporated into the site grid.

In 1995 a total of 221 artifacts were recovered at FaNq-70 from the three excavation areas outlined in Figure 4.10. Of these, 6 were faunal remains, 12 were lithic artifacts and the rest are post-contact materials. Due to the presence of pre-contact materials at the site, all artifacts have been catalogued under three broad categories: lithic, faunal and post-contact. Even though the faunal remains may belong to either the pre-contact or post-contact components, because of their distinctiveness as an artifact type, they are included in one category until radiocarbon dating of these remains is feasible. All lithic artifacts were recovered from Level 1. The faunal remains were recovered from Levels 1 and 2.

Among the faunal remains, one avian long bone fragment and two medium-sized mammal long bone fragments were recovered from level 1, Area 2. The remaining faunal remains are unidentifiable fragments from level 2 Area 1. With regard to the lithic artifacts recovered from the site in 1995, these include: one quartzite bifacial thinning flake, a quartzite flake with cortex and one Swan River chert flake from Area 2; and three quartzite flakes, one piece of pink quartzite shatter, two Swan River chert flakes, one chert flake, one conglomerate flake, and one quartzite bipolar

core fragment from Area 3. No lithics were recovered from Area 1. The remaining 215 post-contact artifacts are summarized in Appendix B.

1996 Excavation Activities

The same schools were involved in the 1996 phase of the Grace Adam *Metawewinihk* Archaeology Project as those in 1995 and the students continued to excavate in their "home" territories. Interestingly, during the fall of 1995 a small area in the northeast corner of the site was burned, presumably by vandals. Because of the increased visibility of the area, a piece of burnt planking was identified, likely associated with Feature B (Figure 4.11). As a result, three additional 1m x 1m excavation units were measured out for the 1996 spring and fall excavation seasons, now referred to as Area 4. These units were only excavated to a depth below datum of between 4 and 7cm. below datum during that period as the bulk of recovery efforts continued to focus on the 2m x 2m excavation areas.

A total of 285 artifacts were recovered during the 1996 field seasons. The post-contact materials are tabulated in Appendix B. With regard to faunal remains, a total of 20 fragments were recovered. Of those, nine cervid tooth fragments and 2 unidentifiable bone fragments were recovered from level 4, Area 1, while 9 unidentifiable bone fragments and one tooth fragment were recovered from levels 1 and 2, Area 3. No faunal remains were recovered from either Area 1 or Area 4 nor were lithic remains recovered from any of the excavation Areas during this time. The 265 post-contact artifacts recovered in 1996 are summarized in Appendix B.

1997 Excavation Activities

Similar to the previous years' activities, in 1997 students continued their controlled data recovery efforts at the site. Participating schools maintained their home territories, but it was decided to measure out and

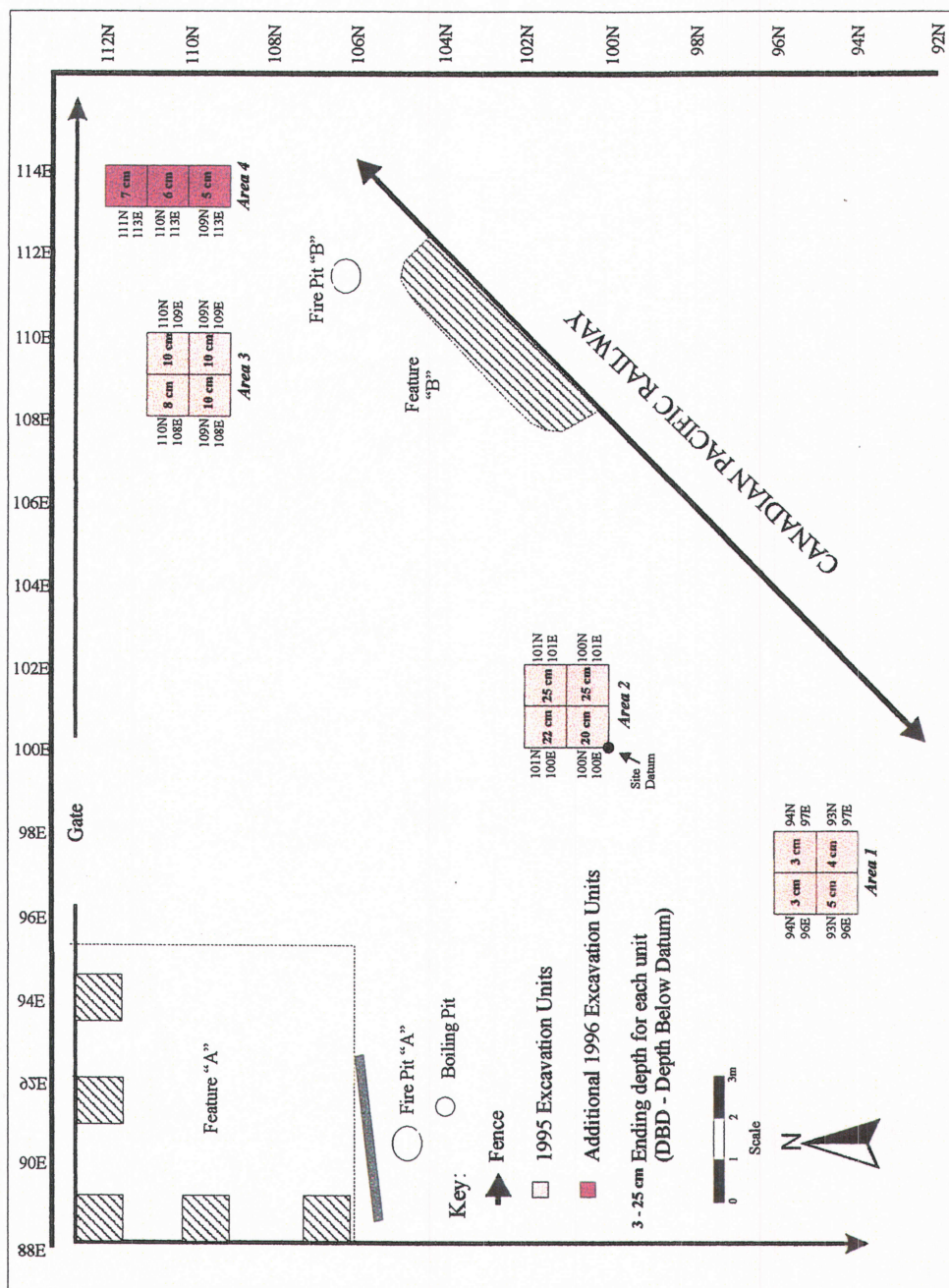


Figure 4.11 1996 Excavation Units Indicating their Respective Depths

open up six 1m x 1m excavation units in the midst of Feature A (Figure 4.12). This allowed greater flexibility for volunteers and staff in dealing with the students. Specifically, it provided the opportunity to minimize the number of students working in a given area at any time.

Two unique project developments occurred in the spring of 1997. Two accelerated grade seven students from Greystone Elementary School joined the project as full time field assistants in order to obtain extra credits from their school. Once trained, they were able to mentor, supervise and assist students from the 3 core schools. In order for their teacher to assess their progress, she was provided with a list of site activities, terms and concepts for examination purposes. This mentorship role worked out extremely well, and is one that should be seriously considered as an on-going component of the project.

The second development was one that resulted in the participation of a Grade 6 class from St. Dominic School. Their teacher had heard about the project and inquired as to the feasibility of a one day working visitation. In order to prepare the students for that opportunity, two field staff executed the "Build-a-Site" lesson for the grade six class prior to field activities. The visitation proved informative because it demonstrated that grade 6 level students were more than capable of working at the site. Like the mentorship experience, this type of "visitation" is one that should continue to be incorporated in the project as well.

A total of 849 artifacts were recovered during the 1997 field season: 739 post-contact artifacts, 89 faunal remains, and, 21 lithic artifacts. The majority of the post-contact remains were recovered from Area 5, from levels 1 and 2, within Feature A. With regard to both lithic artifacts and faunal remains, the majority of these were recovered from levels 1, 2 and 3

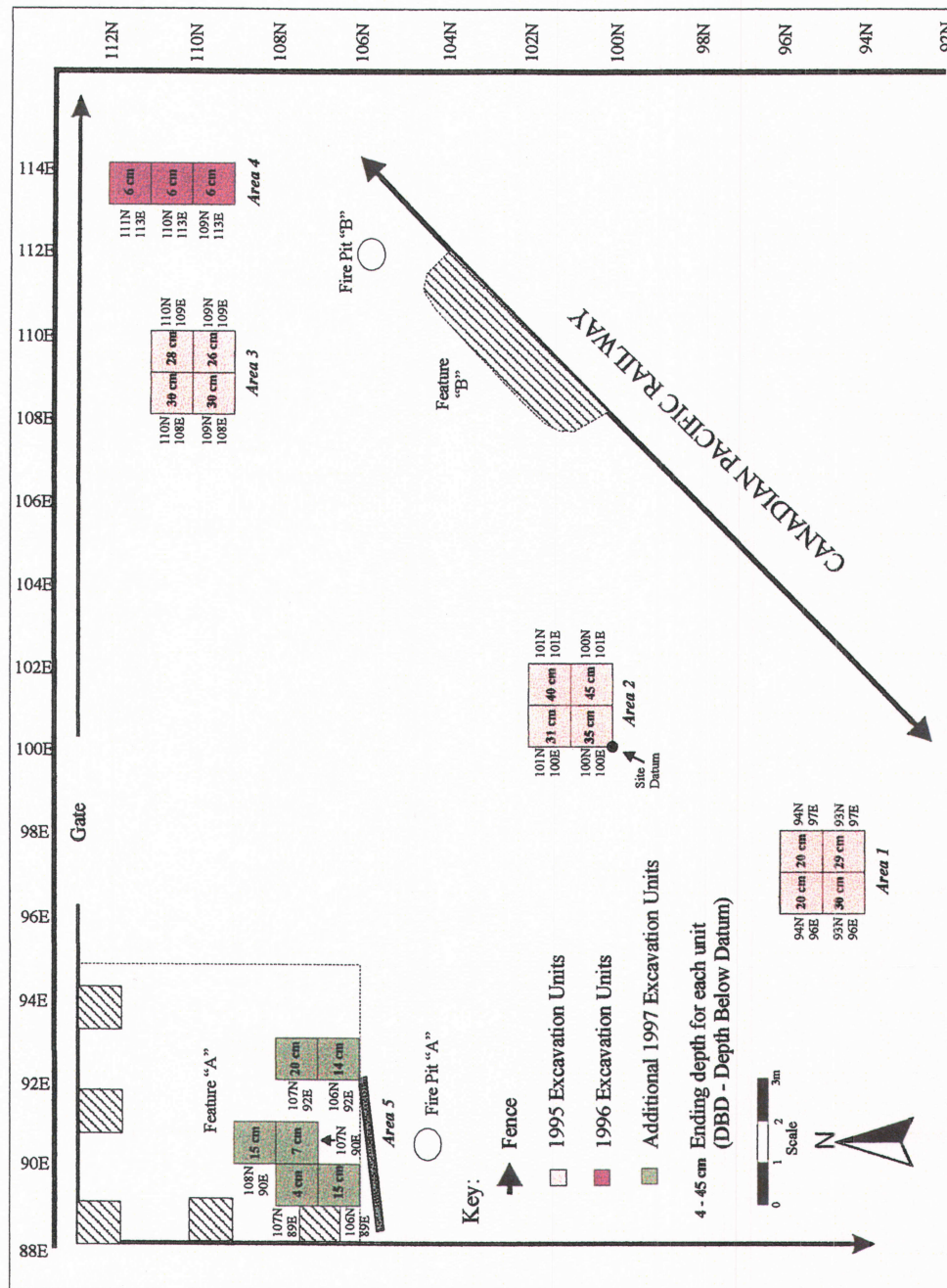


Figure 4.12 1997 Excavation Units Indicating their Respective Depths

in Area 3 , totalling 13 and 52 respectively. The faunal remains and lithic artifacts were recovered as follows:

Twelve faunal remains were recovered from Area 1. Of these, nine unidentifiable fragments were found in level 1, one unidentifiable fragment was found in level 2, and 2 unidentifiable fragments came from level 3. Only one lithic artifact was recovered from this area in level 2.

In Area 2, no lithic artifacts were recovered during the 1997 excavations; however, 23 faunal fragments were recovered. Twenty-one unidentifiable faunal fragments were recovered from this Area, with one retrieved from level 1, two from level 2, 15 from level 3, and three from level 4.

In addition, 22 faunal fragments were excavated from level 3 of Area 3, while the remaining 30 were recovered from level 2, comprising a total of 52 faunal remains for Area 3. Two of the faunal remains are diagnostic, one tooth fragment and medium-sized mammal long bone shaft fragment, both from level 2.

In addition to the faunal remains 15 lithic artifacts were recovered from Area 3 including one Swan River chert flake from level 3, three quartzite and five chert flakes from level 2, and one quartz flake, one quartzite flake, one chert flake and one piece of chert shatter from level 1.

Furthermore, a total of 9 faunal and lithic artifacts were recovered from Area 4 during the 1997 excavations: five lithic artifacts and four faunal remains. All were recovered from Level 1. Of the lithic artifacts, there is one quartzite core fragment, two pieces of chert shatter and two Swan River chert flakes. Of the four faunal remains, one is a small mammal scapula fragment, while the other three are unidentifiable fragments, all of which were recovered from level 1 of Area 4.

Similarly, two unidentifiable faunal fragments were recovered from level 1 of Area 5, while one chert flake, one piece of chalcedony shatter and one chalcedony flake were also recovered from level 1. The remaining siltstone flake was recovered from level 2. A summary of post-contact artifacts recovered during the 1997 field season is provided in Appendix B.

4.3.4 Post-Site Activity Module

The post site activity module involves the execution of two lesson plans, both of which are carried out within a classroom setting. Each is designed to promote critical thinking and reinforce the concept of responsible stewardship (Musser 1998). Furthermore, these lessons attempt to provide cohesion between the excavation experience and the analytical phase of archaeological research.

4.3.4.1 Cleaning and Cataloguing Artifacts

Designed to be straightforward and informative, this lesson plan further provides students with a comprehensive understanding of stewardship. The concepts of accurate record keeping and appropriate storage of artifacts are discussed with the students. Moreover, students are required to clean and dry the artifacts recovered from their excavation area(s) as well as fill out new artifact cards. Project staff provide artifact record numbers to each of the students so that they can individually develop an artifact catalogue record.

This lesson plan is intended not only to demonstrate to students what happens to the artifacts after they are excavated, but also to enhance the students' knowledge regarding the responsibilities of appropriate record

keeping. In turn, the students are provided the opportunity to experience first hand, some level of responsible stewardship.

4.3.4.2 Archaeological Interpretation

This lesson is designed to provide students with the opportunity to view artifacts as more than simply "treasures". It challenges the students to think critically about what the material remains before them really represent. To that end, several interpretive stations of artifacts are set up, each with a set of questions to encourage the critical analysis of the remains. Not only are students encouraged to work in research times and share their ideas, but they are also encouraged to draw conclusions about the material culture remains they are observing.

This particular lesson plan has the potential to be further developed into a series of interpretive analyses. In particular, lesson plans regarding specific artifact types such as pottery, lithics and post-contact artifacts would complement the findings from the Grace Adam *Metawewinihk* site. In turn, more formal analyses of the artifacts cleaned and catalogued by the students could be realized. The only limitation to this type of exercise is imagination, commitment and funding.

Similarly, insofar as both pre-contact and post-contact materials have been recovered from the site, there exists the opportunity to develop a lesson plan regarding the interpretation of both categories of artifacts. It might prove interesting to see how Aboriginal and non-Aboriginal students interpret the presence of these artifacts.

Another lesson plan could include the comparison of the sedimentary profile at FaNq-70, with that established for the Norby site, also located in Saskatoon within the Riverdale area at 927 Avenue M South. This lesson

would be beneficial in demonstrating the inter-disciplinary approach used in archaeological analysis and interpretation. Students would also be able to visualize the type of information gleaned from stratigraphic analysis.

To summarize, following excavation activities, it is necessary to reinforce the idea that archaeological research is much more than just "digging". Rather, project staff have the responsibility to demonstrate to the students that once the field component is complete, the interpretive and analytical component begins. In turn, this introduces students to the concept of responsible stewardship, as opposed to a "treasure hunting" ethic.

CHAPTER FIVE

THE EAGLE CREEK STONE CIRCLE SITE

5.1 Site Location and Biophysical Environment

5.1.1 Site Location

The Eagle Creek Stone Circle Site is located on a quarter section of land approximately 60 km. west of Saskatoon in Central Saskatchewan (Figure 5.1). The legal land description of the site is the SE quarter of the SW quarter of Section 5, Township 39, Range 10, West of the third meridian. It is located on property endowed to the Saskatoon Catholic Board of Education by Ed and May Scissons in 1994.

5.1.2 Site Environment

The Eagle Creek Stone Circle site, like the City of Saskatoon, is located within a transitional ecological zone between the Aspen Grove Ecodistrict of the Parkland Region and the Mixed Grassland Prairie (Padbury and Acton, 1969; Saskatchewan Parks, Recreation and Culture 1989). Within this transition area, zonal soils are dark brown to black chernozemic, which are dark grassland soils, characterized by dark coloured A horizons and brownish coloured B horizons, underlain by light coloured horizons of lime carbonate accumulation (Moss and Clayton 1979:72).

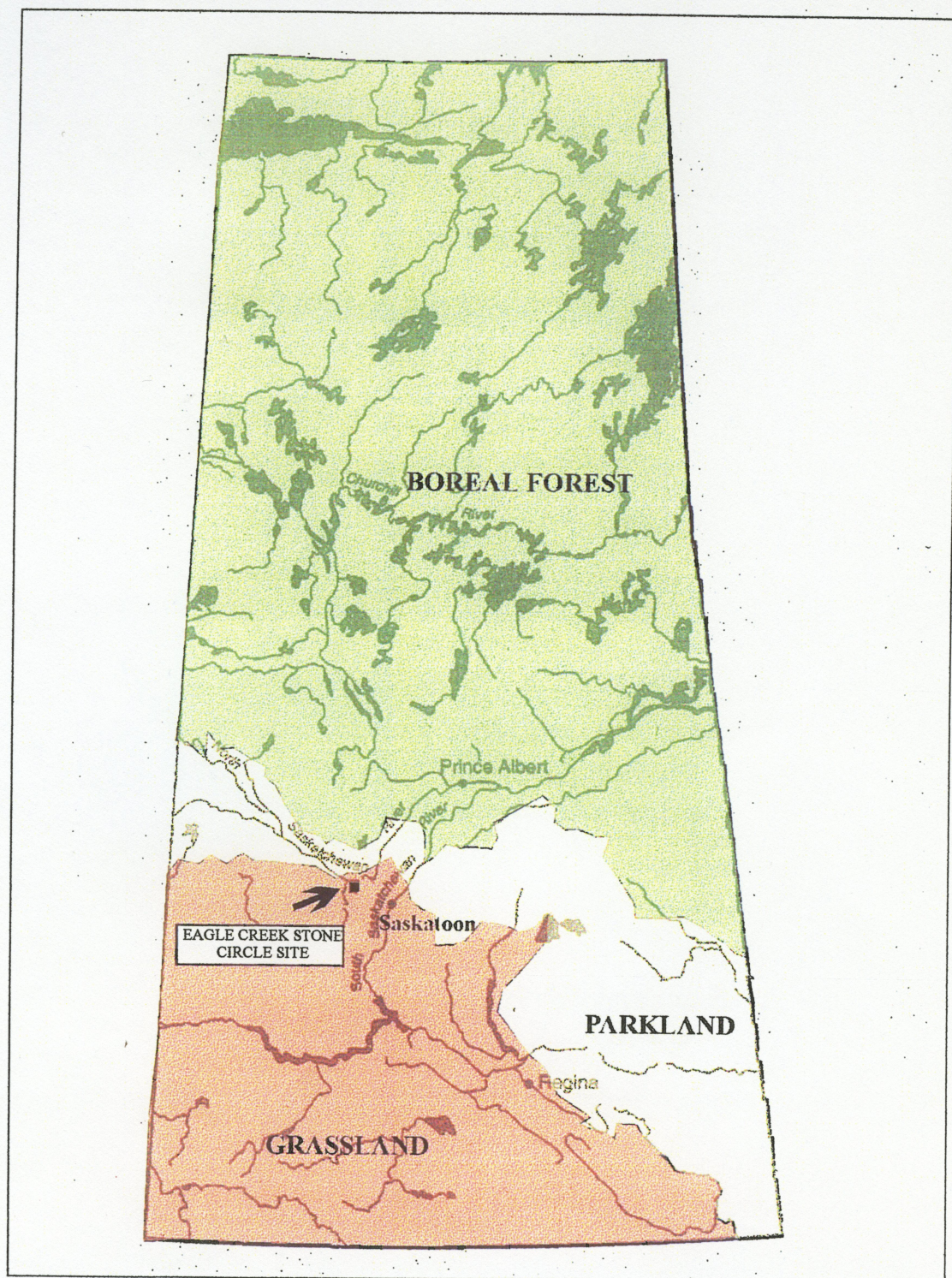


Figure 5.1 Map of Saskatchewan Identifying the location of the Eagle Creek Stone Circle Site

5.1.2.1 Climate

Like the Grace Adam *Metawewinihk* Site, the Eagle Creek Stone Circle site experiences a Dry Warm Humid Continental Climate (Saskatchewan Parks and Recreation 1989; Richards and Fung 1969:4).

5.1.2.2 Regional Flora

Because it is situated within the same transitional zone as the city of Saskatoon, floral species for this area are consistent with those outlined in Chapter Four, regarding FaNq-70 .

5.1.2.3 Regional Fauna

Similar to the regional flora at the Eagle Creek Stone Circle site, faunal species in this region are similar to those outlined in Chapter Four for the Grace Adam *Metawewinihk* site.

5.1.3 Site Physiography

The Eagle Creek Stone Circle site is situated within the Central Saskatchewan Plains landscape unit of the Saskatchewan Plains Region of the Central Lowlands physiographic province (Richards 1969). Eagle Creek empties into the North Saskatchewan River, approximately 3 km. north of the site. A variety of physiographic features are found within this landscape unit, and in particular at this site. The endowed property contains a floodplain, a terrace, and moderately rolling hills. Sections of the stone circle site are found throughout all of these topographic features, with the exception of the floodplain.

5.2 Project Background

5.2.1 Site Discovery

When Ed and May Scissons provided the endowed property to the Saskatoon Catholic Board of Education in 1994, there were specific terms attached to the endowment. The property was to be developed specifically for environmental education activities — it can never be commercially developed. Hence, the property contains both a mobile school facility and a camping area for high school students. During the spring and fall months, students from both elementary and high schools camp for two to three nights at a time while participating in environmental education activities. Both Aboriginal and non-Aboriginal students participate in the programs at the Education Centre.

Following the 1996 spring opening ceremony at the Grace Adam *Metawewinihk* Archaeological site, a Superintendent for the Saskatoon Catholic Board of Education invited the author to visit the Ed and May Scissons Environmental Education Centre. I accompanied four Board of Education staff members, all of whom are Aboriginal. One of these individuals was Elder Mary Lee, employed by the Catholic School Board as a cultural advisor.

The purpose of the visit was to ascertain if an observed ring of stones at the site was in fact a tipi ring. After being directed to the general area of the stone circle, it was evident that there were two stone circles instead of one. Following an offering of tobacco at the site, Elder Mary Lee asked if it was possible to develop an archaeology based education module for the site which did not involve digging. Her concern was to respect the earth, not disturb it. I chose to respect her wishes.

5.2.2 Project Development

The endowed property was formerly used as range land by a neighbouring farmer until the school board asked that the land remain undisturbed. Thus, upon returning to the property to look for more stone circles later the same week with a group of colleagues, the task was indeed a challenge. Grasses had grown over all of the stones, clearly reducing the visibility of stone circles.

Over a two day period, 16 tipi rings were identified and marked out on the east side of the property (Figure 5.2). The following spring a survey of the site was conducted. Unfortunately, being neophytes of digital survey equipment, the survey map was less than accurate when complete. And in 1997 a member of the Eagle Creek Post-contact Society identified one additional stone circle at the site, resulting in a total of 17 tipi rings at the Education Centre.

In terms of initiating a teaching module, the school board's Coordinator of Instructional Services provided a copy of the science curriculum guide for middle level grades, as well as copies of the teaching booklets corresponding to existing environmental education modules. As such, the modules include the following activities: geography and geology; aquatic ecosystems; artist's day; birds; insects and arachnids; botany; and, night activities. In addition to the proposed module on tipi ring archaeology, teaching modules for space education, science and christianity, and Aboriginal spirituality were being considered at the same time. Thus, the environmental modules encompass not only a "hard science" approach, but also humanistic studies. And having a comparative curriculum base from which to produce a module for tipi ring archaeology was invaluable.

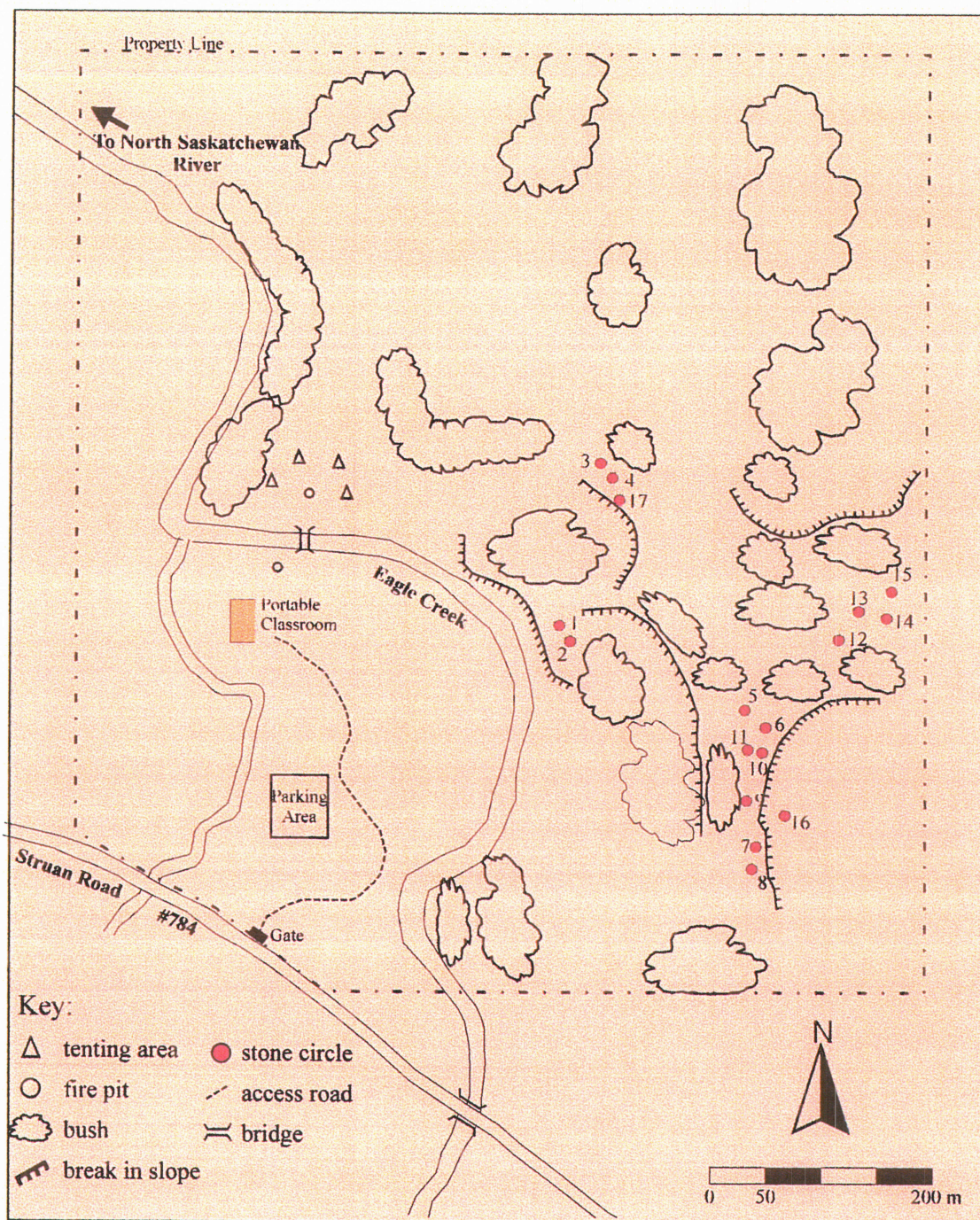


Figure 5.2 Map of the Ed and May Scissons Environmental Education Centre Identifying the Eagle Creek Stone Circle Site.

The school board was to provide all materials required to carry out the teaching module. Therefore, it was decided that a mapping exercise, together with environmental data collection were appropriate course contents. Similar to the lesson plans utilized at FaNq-70, six lesson plans were designed to provide a complete tipi ring archaeology experience for participating students (Appendix C).

Three lessons plans are designed as "pre-site" activities, while the "on-site" activity takes place at the Eagle Creek Stone Circle site. The "post-site" activities are designed as follow up exercises using the data collected at the site. A teaching booklet for teachers has been written (Musser 1997) to complement all phases of the module.

5.2.2.1 Pre-site Activities

The pre-site lesson plans include an introduction to archaeological terms and concepts for students and educators planning to visit the site. Specific contents provided to the teachers include: an archaeology word scramble for each appropriate age group, a vocabulary and definition list, and three posters.

The first poster outlines the CAA's "Statement of Principles Pertaining for Ethical Conduct Pertaining to Aboriginal Peoples", which is intended to introduce students to the ethical realities of conducting archaeological research in Canada. Within the teaching booklet, a discussion on the concepts of respect, oral tradition, and consultation with First Nations peoples is provided.

The second poster, entitled "Decision Making" is designed to encourage students to consider the environmental clues explaining why a location was utilized by First Nations peoples in the past. In addition, information

regarding stone circles in general and stone circle archaeology, specifically, is provided in the teaching booklet.

The third poster provides a 9000 year chronology of Northern Plains Cultures. A discussion of how this chronology has been determined is provided in the accompanying booklet.

The second lesson plan, entitled "Modern Material Culture" employs the use of a pedestrian survey on school property, such as a playing field. To that end, students are divided into four groups and assigned to carry out a survey within an assigned area of a playing field. Each group spreads itself along either a N-S or E-W line at one end of their survey area. Each student walks a straight line, recording every piece of material culture visible in their path until their respective "territory" is completely surveyed.

In this manner, students generate a data base, by identifying and providing a tally for each type of material culture observed. In turn, they interpret and present their findings to their classmates. This lesson plan is designed to encourage critical thinking and provide students with a keen awareness of accurate data collection.

The third pre-site lesson plan is entitled "Getting Ready for the Field". The purpose of this lesson is to familiarize students with field equipment and basic methodologies associated with tipi ring archaeology. To that end students learn to use a sighting compass and directional mapping board to construct a stone circle on the school grounds.

Similarly, students learn how easily environmental data can be collected by using a wind sock and a compass. This exercise encourages students to consider how to determine the placement of a tipi doorway, and potentially, determine the season of occupation (Finnigan 1982). Because of this particular lesson, students are provided with a reasonable expectation

of on-site data collection activities. This is reinforced as they prepare several research questions regarding the Eagle Creek Stone Circle site.

5.2.2.2 On-Site Activities

Activities at the site are divided into two areas: mapping stone circles and collecting data from 8 environmental data stations. All equipment including directional mapping boards, sighting compasses, tipi mapping forms, wind socks, and plant books are provided by the school board.

For the sake of convenience and accessibility, the four tipi rings closest to the mobile laboratory were selected for mapping exercises, leaving the remaining 13 stone circles undisturbed. Students work in groups of four or five and are required to produce a professional map of one tipi ring within a half-day period.

For the other half day, students record data from each of the 8 environmental data stations located throughout the property. They are required not only to determine the wind direction at each data station, but also to describe the environment, including botanical and faunal resources. Forms for this data collection activity are provided in the teaching booklet. The purpose of this activity is to encourage students to consider what types of resources are available in the area today, and in turn consider what types of resources might have been "attractive" to cultures in the past.

5.2.2.3 Post-Site Activities

This portion of the module is conducted upon the students' return to school, and is comprised of two lesson plans: "Putting it all Together" and "The Archaeology Report". The former requires the students to continue working in the same groups as at the site. Worksheets are provided to assist

students in compiling their collective data in preparation for the final report. This particular activity encourages students to improve their analytical, reasoning and communications skills while interpreting their data. Ultimately, this will assist them in understanding how past cultural groups living at Eagle Creek once interacted with their environment.

In order to assist students in interpreting their environmental data, a series of windrose graphics were obtained from Environment Canada, detailing wind direction data between 1953 - 1996, recorded at wind stations in Saskatoon and North Battleford. Examples are provided in Appendix D. Similarly, students are encouraged to consider the impacts of soil erosion and other natural processes when analyzing their data.

In addition, students are made aware that not all of the stone circle features at the site were occupied at the same time. Just as important, students must consider what "attractive" faunal and botanical resources were available to past cultures in the Eagle Creek area and during what season they were available. Information in the teaching booklet provides educators with the background necessary to help students in the regard.

Moreover, based on Finnigan's (1982) calculation that one individual requires 1.85 square meters of space within a stone circle, students must use their mathematical skills to predict the maximum number of individuals that might have occupied each of the four features. In summary, this lesson plan requires students to use a variety of skills including communication, analytical and mathematical skills within a group setting.

The sixth and final lesson plan requires students to complete an archaeology report. A form for the report is provided in the teaching booklet and requires students to provide an introduction, identify their research questions, explain the methodology employed for data retrieval,

provide a discussion of findings, explain their conclusions, and make recommendations for future research.

5.3 Discussion

One of the benefits of this educational module is that an infrastructure exists to ensure the lesson plans are accessible to educators prior to visiting the Environmental Education Centre. Because of the nature of the lesson plans, an archaeologist is not required to oversee the activities — an Education Centre Facilitator is able to provide the necessary supervision. In other words, with very little effort, archaeological research is now one of the educational choices offered to an entire school district.

It is also noteworthy that the development of this module came about as a direct result of the success of the Grace Adam *Metawewinihk* Archaeology Project. Just as important, the voice of a First Nations Elder was respected with regard to the type of programming conducted at the Ed and May Scissons Environmental Education Centre. Moreover, the incorporation of an archaeology based teaching module into an existing Education Centre is a credit to the discipline as a whole. In this regard, public archaeology has provided the opportunity for school board staff to observe, first hand, the educational value of archaeology and in turn, incorporate archaeology based education programming into existing curriculum.

In May of 1997, a group of grade seven students (n=30) were selected by the Saskatoon Board of Education to "test" the archaeology program. They were predominantly non-Aboriginal (83%), and they were all in an "accelerated" program. All phases of the program were well received and the students were motivated to learn. The test program was a success and

was visited by the Coordinator of Instructional Services as well as several elementary and high school principals.

In June of 1997, a group of University of Saskatchewan student volunteers accompanied the writer to the Education Centre in order to work with two Grade 7 schools groups camping at the Centre. The group consisted of predominantly Aboriginal students. The students were not particularly interested in doing anything at all. They were not very well behaved. They were rude to their teachers and rude to the volunteers. None of the student groups mapped a complete tipi ring. They kept walking away and fooling around.

Their unwillingness to participate fully in the project may be traced to a couple of factors. First of all, their teachers did not go through the "pre-site" activities with them, so they were not prepared for the "on-site" component. They may not have reached the maturity level necessary to undertake this type of education programming. In any case, this attempt to assist students through the program was unsuccessful.

CHAPTER SIX

PROJECT INTERPRETATION

6.1 The Grace Adam *Metawewinihk* Archaeology Project

6.1.1 Introduction

In order to provide an appropriate educational experience for participating students, the acquisition of knowledge regarding the host community, the goals of educators, and First Nations lifeways is required. This further requires some research regarding the social and economic realities of First Nations people living in the inner city as well as the processes of communication that exist between educators and parents in the community.

In as much as the goals of archaeological research and the goals of public archaeology differ, it is important to understand the demographics of the public with whom one is interacting. In doing so, it is possible to incorporate aspects of First Nations involvement in the project which allows them to take a leadership role in the opening ceremonies each spring and fall at the site.

6.1.2 Project Evaluation

At the outset, the project was designed to introduce students to the science of archaeology by involving them in an actual archaeological excavation. In doing so, several objectives were outlined, including the

introduction of the students to a variety of specialists associated with archaeological research; the involvement of the students, project staff and the wider community in a project with the potential to foster pride in native culture; the opportunity to provide non-Aboriginal students with a positive cross-cultural experience; to evaluate the project by publishing the results of the field experience, and ideally, incorporate archaeology into existing curriculum.

The degree to which each of these objectives have been met, varies greatly. Students have been introduced to the science of archaeology. They have participated in an archaeological excavation. Archaeology has been incorporated into existing social studies curriculum, primarily at SMCS and SGS, and to a lesser degree at PHCS. An article regarding the project has appeared in the Saskatchewan Archaeology Newsletter and three conference papers regarding the project have been presented.

However, with regard to providing non-Aboriginal students with a cross-cultural experience, considerably more effort is required both by project staff and educators. Both Aboriginal and non-Aboriginal students have their own biases about each other and the discipline of archaeology.

For example, two students from SGS refused to take off their day packs when working at the site because they were afraid Aboriginal people living in the area would steal them. Also, following the first Round Dance held at the site in the fall of 1995, when an Aboriginal student walked in front of a non-Aboriginal student, the latter made a derogatory comment about the Aboriginal student's mother. Elder Maria Linklater took both students aside and explained the concept of respect for other cultures.

While preparing Aboriginal students from SMCS for the on-site experience, the Project Coordinator asked the students to choose

"excavation team" names. The first name chosen was "grave diggers". Similarly, an Aboriginal resident in the area noticed that the site had been vandalized one evening. He contacted Laura Foley and stated that "someone has broken into the burial site".

In other words, everyone participating in the project has been influenced by what they have seen on television, what they have heard from family members and peers, and what they have read in books. Thus, the potential to dispel some of those perceived "myths" can be realized by providing a positive cross-cultural experience for the students, while at the same time reinforcing what archaeology is and what archaeology is not.

Another shortcoming of this project is that it commenced without a research design in place. When I joined the project in the spring of 1995, the Project Coordinator expressed her indifference to a formal research design. There was no mesh screen at the site to sift soils through, nor was there any plan to access such equipment during the spring session. Moreover, there was neither a plan to develop the project in the future, nor was there any discussion forthcoming with regard to the cultural materials recovered.

When I took over the position as Project Coordinator in the fall of 1995, I felt several important issues regarding the project needed to be addressed. First of all, with the expansion of the project, there was a greater need to access funding for the project. Increased funding would allow a small staff to provide consistent on-site training for the students, which in turn would result in the practice of better recovery techniques by participating students. Increased funding was accessed for the spring of 1996 through various agencies, which helped supplement funding provided by the Saskatoon Catholic Board of Education.

A second concern was finding a way to involve First Nations Elders in the project. This too required additional funding in the form of honoraria. The involvement of First Nations Elders in the project was important for several reasons. First of all, including them in the project fulfills the Community School mandate to have them involved in the education of their children and/or grandchildren. It also provides them with the opportunity to share important information to participating students regarding the concept of respect for the earth. Furthermore, it provides them a first hand opportunity to observe what archaeology is, rather than what it is not.

Indeed, when asked what she thought of the project during the 1996 "Archaeology Day in the Park Celebration", Elder Maria Linklater stated:

"It is so important that our children are given an opportunity to have that self-esteem to feel good about themselves, and one of the ways we can do that is to give back the teachings to our children, and when we do that we are giving them their identity and also a place for them in this world".

With regard to her comments, it is argued that the Elders' involvement at the site has done much to bridge perceived differences between the local First Nations community and the discipline of archaeology.

Finally, I felt it necessary to develop classroom lessons plans for the winter months which designed to follow up on the results of each fall's field excavations. The first attempt to do this was during the winter months of 1996. This was not a particularly successful endeavour. Students did not appear very interested in cataloguing artifacts or learning about artifact types. They wanted to dig. Period. This may well be a reflection of the age of the students as well as the pre-conceived ideas they have regarding what archaeology is really about.

No formal evaluation methodology was incorporated into the project, although students were encouraged to make comments regarding their impressions of the project on their daily log forms. Comments such as "I had a good time", "I wish I could stay longer", and "it was fun" were often recorded. From a subjective point of view students appeared to enjoy the Build-a-Site lesson, the Elders Blessing and Sharing, An Archaeology Day in the Park and the excavation component of the site far more than the post-site activities.

Understanding curriculum requirements within a Community School setting is also an important aspect of program development for this project. It provides the archaeologist the opportunity to consider goals and objectives other than those of their own profession. It also demonstrates to archaeologists the importance of community involvement in education in the inner City of Saskatoon. And finally, this project clearly demonstrates the interdisciplinary nature of public archaeology.

6.1.3 Recommendations for Future Programming

For the project to proceed with continuity and consistency, it is recommended that the Saskatoon Catholic Board of Education consider employing an archaeologist as a full-time Project Coordinator, and further provide funds to hire field staff for excavation activities each spring and fall. This would provide the Coordinator with time and opportunity to prepare a proper research design regarding future excavation activities as well as the analysis of the artifacts and features found at the site. It would also provide the School Board with the support staff to teach educators about the discipline of archaeology, and what they can expect their students to learn from participating in this project.

In as much as the project did proceed during the spring of 1998, it is recommended that two questionnaires be distributed at some point in the future, should the project continue: one to participating educators, and one to participating students. This will allow for a more accurate assessment of project success and well as identify the need for changes and improvement to the overall programming.

It is also recommended that First Nations involvement continue since the host community is comprised primarily of First Nations and *Metis* individuals. Better still, due to the pre-contact component identified at the site, archaeologists have the ethical responsibility to continue this aspect of the programming.

It has been suggested that one way to make the interpretive experience both interesting, symbolic and cross-cultural in design, is to have students dig in round holes, rather than square holes. This would reinforce to non-Aboriginal students, the Aboriginal worldview that all things move in a clockwise direction (Dr. Urve Linnamae, Department of Anthropology & Archaeology, University of Saskatchewan, personal communication December 17, 1999). This would require the archaeologist to adapt her/his worldview regarding how a site grid should be set out and excavated. This would also be symbolic as there are both pre-contact and post-contact components at the site as well as Aboriginal and non-Aboriginal students working at the site. Something for future Project Coordinators to consider.

The opportunity to teach students about the inter-disciplinary nature of archaeological research can be realized by comparing the sedimentary profiles from FaNq-70 to those identified at the Norby site. A final recommendation is to develop the cataloguing and artifact interpretation components of this project, possibly culminating in a student produced

report. It is important that students have a good understanding that the archaeological experience does not end when the excavations stop.

6.2 The Eagle Creek Stone Circle Site

6.2.1 Introduction

Stone circle research carried out at the Ed and May Scissons Environmental Education Centre is designed to respect the request of a First Nations Elder that the project be non-invasive. Moreover, because there is an infrastructure in place to oversee all of the environmental based education programs at the Education Centre, it is not necessary for an archaeologist to be on-site when students map the stone circles. A facilitator for the Catholic School Board is trained to supervise this aspect of the teaching module.

Teaching modules were designed in relation to Middle School Level science curriculum to complement existing programs at the site. Understanding the goals, objectives and requirements of the School Board in this regard was very useful in terms of lesson plan development. Of particular importance to the profession of archaeology, is the fact that archaeology has become an accepted educational component at this facility. Just as important, the invitation to develop an education based archaeology teaching module at this site came about as the direct result of School Board officials observing first hand, activities at the Grace Adam *Metawewinihk* Archaeology site.

6.2.2. Project Evaluation

The stone circle education program at the ECSC site is part of a larger education project carried out at the Environmental Education Centre. Not

every user group at the Education Centre will choose to participate in the archaeology module. While Saskatoon Catholic School Board staff has provided positive verbal feedback regarding the development of the module, no formal evaluation of the program was designed.

6.2.3 Recommendations for Future Programming

Although the archaeology program at the ECSC site is designed to complement a larger program at the Ed and May Scissons Environmental Education Centre, several recommendations are proposed in order to enhance the program.

To determine the effectiveness and/or success of this program, it is recommended that a formal evaluation process be designed in the form of two questionnaires, one for participating educators, the other for participating students.

It is also recommended that a Saskatchewan Archaeological Resource Record be prepared and submitted to the Saskatchewan Heritage Branch by the Facility Coordinator, one group of participating students, and at least one archaeologist. This could be done with the assistance of a member of the Eagle Creek Historical Society (ECHS). Such collaboration would allow members of the ECHS the opportunity to see the site, meet the Facility Coordinator and provide some education regarding the Borden site designation system.

A final recommendation is that the Facility Coordinator reinforce the connection between the shape of a tipi ring, the way a tipi ring is mapped and the Aboriginal worldview that all things move in a clockwise direction.

Should the Saskatoon Catholic Board of Education hire a full time Project Coordinator for the GAM project, that individual could also provide support and make recommendations regarding the enhancement of the program at the ECSC site. In turn, the School Board would have a resource person available to instruct educators about the scientific nature of archaeology.

CHAPTER SEVEN

SUMMARY AND CONCLUSIONS

7.1 Summary

The Grace Adam Metawewinihk Site and the Eagle Creek Stone Circle site are sites focussed on educating students about the nature of archaeological research in diverse settings. Both sites are located on land owned by the Saskatoon Catholic Board of Education. Archaeology-based education programming at these sites was designed to complement the Core Curriculum requirements of Community Schools in Saskatchewan.

Furthermore, a concerted effort was made to involve First Nations Elders and community members in the Grace Adam Metawewinihk Archaeology Project for several reasons: 1) as a member of the Canadian Archaeological Association, the author has an ethical responsibility to do so; 2) there is at least one pre-contact component identified at the site, and 3) the host community where the site is located is primarily Aboriginal in character.

Preparing programs for both of these sites required that the goals and objectives of archaeologists, educators and First Nations be considered. While a formal research design has yet to be determined for the GAM site, the initial objectives of the project have been met, with varying degrees of success. Moreover, the involvement of First Nations Elders has become an important component in terms of the continuity of the project.

Programming for the ECSC site was influenced by the request of a First Nations Elder that the program not involve excavation. As a result, a non-invasive archaeological program was developed that met the goals of the archaeologist and conformed to the educational programming already in place at the Ed and May Scissons Environmental Society.

In summary, providing meaningful archaeology-based education programs requires the imagination, flexibility, and accountability of all parties involved. Providing a positive experience for participating students was critical to the success of each of the projects. Finally, communicating with and listening to First Nations Elders provided much needed counsel in terms of program direction, both current and future.

7.2 Conclusions

In developing archaeology-based education modules such as the ones designed for the Grace Adam Metawewinihk Archaeological Project and the Tipi Ring Archaeology Education Module at the Ed and May Scissons Environmental Education Centre, it is important to understand the social, economic and political environments of all parties involved.

This requires a critical reflection of the discipline of public archaeology, its goals, its values and its audience. Similarly, it requires a comprehensive understanding of how educators and First Nations perceive archaeology. In addition, research into the goals and objectives of educators within their respective communities is necessary in order to provide meaningful and respectful programming. In other words, there are many considerations in addition to the archaeological resource and/or a research design when developing public education programs.

One of the most important aspects of this type of public archaeology is the image portrayed to participating students regarding the profession of archaeology. It is necessary to downplay the "Indiana Jones treasure hunting" ideal, yet at the same time continue to provide an interesting and entertaining experience for the students. Better still, since the students participating in these programs today are the decision makers of the future, it is important that their experience at the site(s) be positive and memorable. Providing them with good memories may translate into more funding in the future for public and educational archaeology endeavours. At the same time, it is important that a truthful experience regarding the realities of archaeological research be provided.

A number of recommendations regarding these projects have been presented. These recommendations have the best chance of coming to fruition if a full-time Project Coordinator position was established by the Saskatoon Catholic Board of Education. This would provide both the time and opportunity to review the project to date, identify changes necessary to enhance programming, and provide information and support to educators regarding archaeology as a professional endeavour.

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APPENDIX A
Lesson Plan Summaries
for the
Grace Adam *Metawewinihk* Archaeology Project

Lesson Plan Summary

Build-a-Site

Objectives and Learning Outcomes

To introduce students to the basic terms, concepts and realities of the profession of Archaeology.

- define archaeology, artifact, ecofact, feature and context
- describe potential evidence recovered from specific "activity areas"
- discuss the ways one resource from the environment can provide the "bare necessities of life"
- describe how "evidence" might be abandoned at a "site"

Learning Resources

- Notes for the teacher
- Heavy duty poly, pails, trowels, dust pans, brushes, 1/4" mesh screen

Context & Activities

This teaching module is undertaken prior to site visitations each fall term. It involves building a site with the students in their classroom. As a result, students are taught a little about site formation, how to identify artifacts, ecofacts and features, and potentially, activity areas. This exercise works well toward introducing students to the very important concept of context.

Lesson Plan Summary

Drafting Research Questions

Objectives and Learning Outcomes

To encourage students to work as a group to develop a set of archaeological research questions

- use group dynamics to formulate research questions regarding the Grace Adam *Metawewinihk* site
- discuss the viability of each question
- describe methods of extracting information from the site to answer these questions

Learning Resources

- Record questions in either Social Studies or Science notebooks
- Refer to what they learned from Module A

Context and Activities

With reference to Module A, project staff work with students to develop a set of research questions regarding the site such as those outlined in Table 1. Some questions are similar, some ambiguous, some overzealous, yet regardless of such observations, each question is recorded exactly as presented to project staff. This is done in order to demonstrate to students that all research questions are worthy of consideration. Teachers are encouraged to review the research questions from time to time, and modify them as the students deem fit.

Lesson Plan Summary

Setting Out a Site Grid

Objective and Learning Outcomes

Investigate the means through which a site grid is prepared for excavation.

- Define "grid"
- Describe the process of measuring out a unit
- Describe how to "triangulate" a unit
- Discuss ethical conduct pertaining to archaeological excavation
- Discuss the relevance of the Heritage Property Act

Learning Resources

- compass
- measuring tapes
- string
- rocks with red dots in the centre

Context and Activities

This activity also occurs prior to site visitation. This is an important activity in terms of reinforcing the "science" of archaeology. And it is rather amazing to observe how quickly students figure out how to triangulate a 1m x 1m excavation unit. Just as important, this activity provides the instructor with an opportunity to share with students the importance of record keeping in relation to the provenience of artifacts, and how those records relate to a site grid. It also allows the instructor to introduce the concept of stewardship of heritage resources by discussing what the Heritage Property Act is and how it relates to this particular project. In turn, this lesson provides the opportunity to discuss ethical conduct relating to on-site and post-site activities.

Lesson Plan Summary

Elders Blessing and Sharing

Objectives and Learning Outcomes

To provide students with a cross cultural learning opportunity

- Discuss the importance of respecting the earth
- Discuss the relevance of the Elder's blessing
- Describe at least two ways to practice respectful behaviour at the site
- Discuss the relevance of moving in a clockwise direction while serving refreshments to the Elder and other students

Learning Resources

- None required

Context and Activities

Each fall, the participating students from each school are invited to the site to meet with a First Nations Elder, share in the Elder's blessing and hear the Elder share her/his thoughts about Mother Earth and how people should respect the earth, hence the site.

Refreshments are served following the sharing, during which time students distribute refreshments to each other in a clockwise direction, indicating the circle of life. This is deemed an extremely important activity for the students as it not only promotes a cross-cultural sharing opportunity, but further provides the opportunity for students from different schools and different cultural backgrounds to interact with one another.

Lesson Plan Summary

An Archaeology Day in the Park

Objective s and Learning Outcomes

To provide continuity for the students between the materials first observed when building a site, to learn how they were used in the past, and to provide a cross cultural experience as students interact with each other and members of the First Nations and *Metis* community

- Describe the method for "firing" pottery before kilns were available
- Describe at least two pre-contact cooking methods
- Describe and explain how fire was made during "pre-contact" times
- Explain the significance of the atlatl in terms of hunting success
- Describe how a petroglyph is made

Learning Resources

- spears, atlatls, bison replica
- raw pottery, bison meat, wild parsnips, wild onions, tripod/pot for cooking bison stew, water proof material for boiling pit
- rocks, stencils and chalk for petroglyphs
- materials for fire starting — string, wood, rock base, cat tails
glass or stone for flintknapping, antler tines, rawhide, bandaids

Context and Activities

Each spring a day of hands-on activities are organized for participating students. The day's activities begin at dawn with a private tipi raising and smudging ceremony by native Elders. Students and project staff are asked not to attend due to the spiritual nature of these activities. For the students, the ceremonies commence with an Elder's blessing, followed by the Elder's sharing, and finally, songs by the St. Mary's Community School Oskayik Drum Troupe.

Seven learning stations are available where students participate in: pottery making; pre-contact cooking; fire starting; spear and atlatl throwing; flintknapping; petroglyph making; and, aboriginal craft making stations.

Lesson Plan Summary

Controlled Data Collection

Objectives and Learning Outcomes

To provide students with an actual archaeological field experience over a six-week period, each spring and fall.

- describe the methodology to measure the corners of an excavation quadrant
- explain the reason artifact cards must be filled out
- discuss the relevance of level record forms
- describe the methodology for determining artifact provenience
- explain the rationale behind profile drawings
- discuss the reasons for making planview drawings

Learning Resources

- pails, trowels, brushes, clippers, dust pans
- metal spikes, string, line levels, flagging tape
- artifact cards, pencils, erasers, plastic bags, twist ties
- level record forms, daily log forms, planview sketch forms, profile sketch forms
- 1/4" mesh screen and tripod, rope
- heavy duty poly

Context and Activities

Since there are three schools participating in all phases of this project, each school is assigned its own excavation territory for the duration of field activities. Students are assigned to work in discrete quadrants of a particular unit for the duration of their participation in the project. They trowel soil in 10 cm. arbitrary levels. All materials are screened through 1/4" mesh. Three point provenience is assigned to all recovered artifacts and a catalogue record is kept. Project staff and volunteers work closely with the students to ensure accurate field notes and records are kept. In addition, students are provided the opportunity to produce a profile diagram of a test unit wall.

Lesson Plan Summary

Cleaning and Cataloguing Artifacts

Objectives and Learning Outcomes

To provide students with a comprehensive understanding of stewardship responsibilities, from accurate record keeping to preparing artifacts for permanent storage.

- Discuss the importance of accurate record keeping procedures
- Explain the need to clean artifacts
- Discuss why it is necessary to produce an artifact catalogue
- Define "repository", and discuss its role in responsible stewardship of heritage resources

Learning Resources

- mixing bowls
- various sizes of sieves
- tooth brushes
- catalogue data recording forms
- artifact cards, plastic bags, twist ties, pencils and erasers

Context and Activities

All artifacts recorded and collected during the fall term by each school are cleaned by participating students. Students use brushes to clean each artifact after it is placed in a sieve and immersed in water. The artifacts are set to dry on paper covered trays, with the corresponding artifact card. Project staff assign artifact numbers to each artifact so that the students can individually develop an artifact catalogue record.

This teaching module is intended not only to enhance the students' knowledge regarding the responsibilities of appropriate record keeping, but also to demonstrate to students what happens to the artifacts once they are collected in the field, and further, it reinforces the students' ideas of responsible stewardship of heritage resources.

Lesson Plan Summary

Artifact Interpretation

Objectives and Learning Outcomes

To encourage critical thinking through the analysis of material culture remains.

- Develop classification schemes
- Describe how artifacts are used as evidence to identify human activities
- Discuss what different pottery styles suggest regarding site occupation.

Learning Resources

- Worksheet - "Archaeological Analysis"
- potsherds, buttons, stone tools, etc.
- signs indicating different analysis "stations" in the classroom

Context and Activities

Carried out during the winter months, this teaching module provides students with the opportunity to look at the artifacts as more than simply "treasures" found in or on the ground. Students learn how to analyze and classify artifacts, as well as how to draw preliminary conclusions regarding the types of activities various artifacts might represent. This is an extremely important exercise as it provides the opportunity to dispel the popular myth that archaeology is "treasure hunting", and that finding artifacts is the ultimate goal of the archaeologist. In other words, this module challenges the student to think critically about what the artifacts really represent. Furthermore, it allows students to work in research teams and share their ideas in order to form conclusions about the materials they are analyzing.

APPENDIX B
Summary of Post-Contact Artifacts
Recovered During the 1995, 1996 and 1997 Field Seasons
at FaNq-70

Summary of Post-Contact Artifacts Recovered from FaNq-70 in 1995

Artifact Type	Area 1	Area 2	Area 3
Glass Fragments			
white			
clear	2	1	3
brown		11	1
amber			
green			
mauve			
yellow			
mirror		3	
Plastic Fragments			
clear	2	43	
white			5
blue		3	
yellow			1
brown		2	
red		1	
Metal Items/Fragments			
nails	1	4	
screws		2	
bolts		1	
washers		6	
batteries		2	
gun shell casings			
wire	3	2	1
tin cans			
foil	2		2
thumb tacks			
misc. frags	4	14	3
Construction Frags/Mtls			
wood	1	8	
bark			
tarpaper			3
oilcloth		1	
slag	5	12	
linoleum			
roofing tiles	1	3	
red brick			
pink brick	1		
miscellaneous			

1995 Summary (continued)

	Area 1	Area 2	Area 3
Ceramic Fragments			
tile	7	9	1
pottery		1	
Rubber Fragments			
black			
grey	3		
yellow			
pink eraser		1	
adhesive			
miscellaneous			
Miscellaneous Materials			
charcoal	6	8	1
styrofoam	1		
leather			1
toys			
limestone			
candy wrappers			
buttons			
fabric			
insect remains			
berries			
pen frags			
pencil frags		1	
bottle caps			1
gauze			
particle board			
swizzle sticks			
straw wrappers			
fire cracked rock		1	
chalk	1		
other			

Summary of Post-Contact Artifacts Recovered from FaNq-70 in 1996

Artifact Type	Area 1	Area 2	Area 3	Area 4
Glass Frags				
white	1			
clear	2	7	30	5
brown	1	8	4	30
amber				
green		4		1
mauve				
red				
yellow				
mirror				
Plastic Frags				
clear	6	19		2
white			2	3
blue			1	3
yellow	1		2	
pink	1			
black		1	1	
Metal Frags				
nails	1			2
screws		3		
bolts				
washers		1		
batteries				
ring screws				
shell casings				
wire				4
tin cans				
foil			1	1
thumb tacks				
misc.		11	7	2
Const.Frags				
wood	7	1	4	7
bark				
tarpaper		10	5	1
oilcloth				
slag	5	8	5	6
linoleum				
roof tile		1		3
red brick				

1996 Summary (continued)

	Area 1	Area 2	Area 3	Area 4
Ceramic Frags				
tile	1		10	
pottery		1		
Rubber Frags				
black		1		
grey	1			
yellow				
pink eraser			1	
adhesive				
caulking	1			
Misc. Fragments				
charcoal		8		
styrofoam			1	
leather			1	5
toys				
limestone				
wrappers				
buttons				
fabric			1	
insect rem.				
berries				
pen frags				
bottle caps				
gauze				
particle board				
swizzle sticks				
straw wrappers				
fire cracked rock				2

Summary of Post-Contact Artifacts Recovered from FaNq-70 in 1997

Artifact Type	Area 1	Area 2	Area 3	Area 4	Area 5
Glass Fragments					
white	4		1	1	
clear	87	2	1	5	83
brown	5	1	1		44
amber	4			12	26
green	9				2
mauve	5				
red			1		
aqua	1				
Plastic Fragments					
clear			1	1	12
white	1				7
blue	1				1
brown				1	1
Metal Items/Frags					
nails	8		1		2
screws	2				120
bolts					
washers					
batteries	1				
ring screws					6
shell casings	1				1
wire	2		1	3	7
tin can	4		27		1
foil	1				2
thumb tacks					2
rivet	1				
misc.	19	2	3	1	24
rebar	1				
Construction Frags					
milled/sawn	1		1	3	6
tarpaper				13	3
oilcloth	2				
slag	16	2	9	2	10
linoleum	3				
roof tile					7
red brick	1	1			10
pink brick					

1997 Summary (continued)

	Area 1	Area 2	Area 3	Area 4	Area 5
Ceramic Fragments					
tile	5	1			34
pottery	2			1	
Rubber Fragments					
black	2		1		
grey					
yellow					
pink eraser					
adhesive					
hunting knife					1
miscellaneous					
Misc. Materials					
charcoal	4		9		3
styrofoam					
leather				1	
car toys					1
limestone					
candy wrappers			1		1
buttons	1				
fabric	1				
insect remains		1			
berries					1
pen fragments					
bottle caps					
gauze					1
particle board					1
swizzle sticks					1
straw wrappers					1
fire cracked rock	1			5	2
wax paper					1
other	1 (possibly a snuff lid)				

APPENDIX C
Lesson Plan Summaries
for the
Eagle Creek Stone Circle Site

Lesson Plan Summary

What is Archaeology?

Objectives and Learning Outcomes

To introduce students to the basic terms, concepts and realities of the profession of Archaeology

- explain ethical conduct for archaeologists
- define archaeology
- define three types of stone circles
- identify four important environmental resources for site selection
- define oral history
- define cultural chronology
- explain the Heritage Property Act as it pertains to archaeology
- define artifact, ecofact and feature

Learning Resources

- Notes for the teacher
- Activity form: Archaeology Word Scramble
- Section 1 - vocabulary list
- Posters (archaeology kit)

Context and Activities

Within a classroom setting, students are introduced to the terms and concepts associated with the discipline of archaeology.

Furthermore, an indepth discussion regarding ethical conduct, respect for First Nations and legal obligations are provided.

Terms and concepts are reinforced through completion of an age-appropriate word scramble. Posters are provided to reinforce ethical issues, to provide a chronological history of Northern Plains prehistory, and to introduce decision making concepts regarding pre-contact hunters and gatherers.

Finally, students are provided an indepth background to the topic of stone circles, what they are, how to identify them, what the average size of a site is, where they are located, and why they are important.

Lesson Plan Summary

Modern Material Culture - The Archaeological Survey

Objectives and Learning Outcomes

Students will become familiar with the concepts of pedestrian survey and data collection by conducting an archaeological survey and data collection exercise on the school playground.

- explain the concept of pedestrian survey
- define surface feature
- describe a directional mapping board
- explain why accurate data collection is important

Learning Resources

- Notes for the teacher
- Activity Worksheets: Modern Material Culture and The Survey Data
- Direction board (archaeology kit)

Context and Activities

This activity takes place in a school yard and involves careful data collection. Students are divided into four groups and each is responsible for recording all observable material culture remains situated within a specific quadrant of the school yard.

Each group compiles their "data" following the exercise and presents their "evidence" to the rest of the class. Students must identify specific activities relating to the observed data.

The results for each group will be compared to the other groups to determine if certain activities occur in different locations in the school yard.

Lesson Plan Summary

Getting Ready for the Field - How to Collect & Record Data

Objectives and Learning Outcomes

To familiarize students with field equipment and basic methodologies employed by archaeologists at a tipi ring site. Students will also learn how easily environmental data can be collected by using a windsock and a compass. They will also be required to identify as many plants as possible in/on the school playground. Finally, students will prepare several research questions regarding the Eagle Creek Stone Circle site.

- compile 3 research questions in preparation for Eagle Creek
- explain how to use a directional mapping board
- describe how to use a sighting compass
- explain how wind direction is recorded

Learning Resources

- Activity Worksheet: Environmental Data
- Directional board (archaeology kit)
- Sighting compass (archaeology kit)
- Measuring tape (archaeology kit)
- Windsock (archaeology kit)
- Poster - Decision Making

Context and Activities

Students are provided with the equipment necessary to construct a stone circle in the school yard. This is the same equipment that is used to map tipi rings at the Eagle Creek Stone Circle Site. They are also required to record the wind direction using a sighting compass and a windsock. In addition, they will learn how to identify local botanical resources, which they will be required to do at the Education Centre. These activities elucidate the scientific nature of archaeological research as well as reinforce the fact that archaeology data can be retrieved by methods other than excavation.

Lesson Plan Summary

The Archaeological Field Experience

Activity I. - Collect Environmental Data

Objectives and Learning Outcomes

Students will learn the importance of environmental data collection to archaeological research. Each group of students will be required to collect weather, botanical and faunal data from each of the eight data stations at the site. All data will be recorded in the activity booklet.

- explain how to determine wind direction
- name four botanical species found at the Education Centre
- name two faunal species native to the Eagle Creek area
- provide two reasons why Eagle Creek was an attractive location for pre-contact First Nations peoples

Learning Resources(per group)

- Activity Booklet: The Eagle Creek Stone Circle Site
- One wind sock
- One sighting compass
- Pencils and erasers

Activity II. - Mapping a Tipi Ring

Objectives and Learning Outcomes

Students will learn how professional archaeologists map a tipi ring. Each group will be provided with the equipment to map at least one tipi ring. This activity will reinforce some of the concepts and skills learned during the pre-site phase.

- describe the methodology employed to map a stone circle

Learning Resources (per group)

- Activity Book - The Eagle Creek Stone Circle Site
- Tipi mapping board
- Tipi mapping forms
- Clipboard, pencils and erasers
- One centre spike and four corner spikes
- Windsock and sighting compass
- One large tape measure
- Two Small tape measures
- Hammer

Lesson Plan Summary

Putting it All Together!

Objectives and Learning Outcomes

To encourage students to compile and analyze the data collected at the site. This includes data from both the morning and afternoon activities. Students will work in groups to consider what important factors may have affected the decision of past people to camp at the Eagle Creek location.

- explain how the season of site occupation is determined
- describe how the area of a stone circle is calculated
- describe where the doorways were likely located for each of the four stone circles mapped
- identify three resources available to people at Eagle Creek
- describe what information a windrose graphic provides
- explain how you determine how many people occupied a site

Learning Resources

- Notes to the Teacher
- Activity Booklet: The Eagle Creek Stone Circle Site
- Activity Worksheets- Putting It all Together "A" and "B"

Lesson Plan Summary

The Archaeology Report

Objectives and Learning Outcomes

Students will learn how to put the archaeological facts into report form.

- explain why an archaeology report is necessary
- explain what the contents of an archaeology report should include

Learning Resources

- Notes to the Teacher
- Activity Booklet: The Eagle Creek Stone Circle Site
- Activity Worksheet - The Final Report

Context and Activities

Students work in their assigned groups to produce a group report using the findings from the two previous lesson plans.

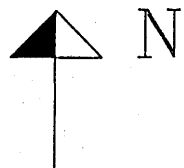
APPENDIX D
Windrose Graphics
Provided by Environment Canada
for Educational Programming
at the
Ed and May Scissons Environmental Education Centre

SASKATOON 'A'

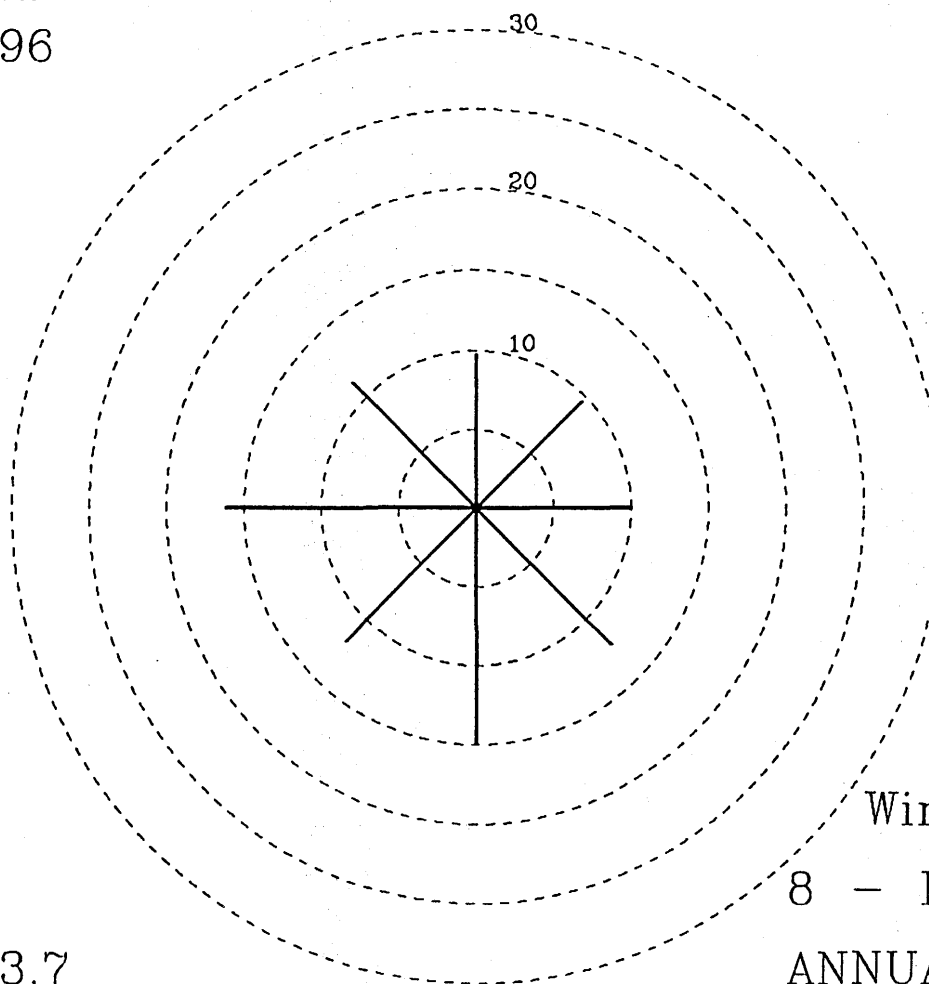
1953-1996



Environment
Canada



DIR	FREQ	SPEED
	%	km/h
N	9.8	17.9
NE	9.6	16.5
E	10.1	17.1
SE	12.3	17.9
S	15.0	15.3
SW	12.0	15.4
W	16.2	18.7
NW	11.3	19.9



%Calm= 3.7

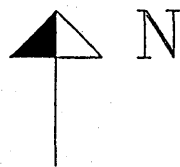
Windrose
8 - Point
ANNUAL

SASKATOON 'A'

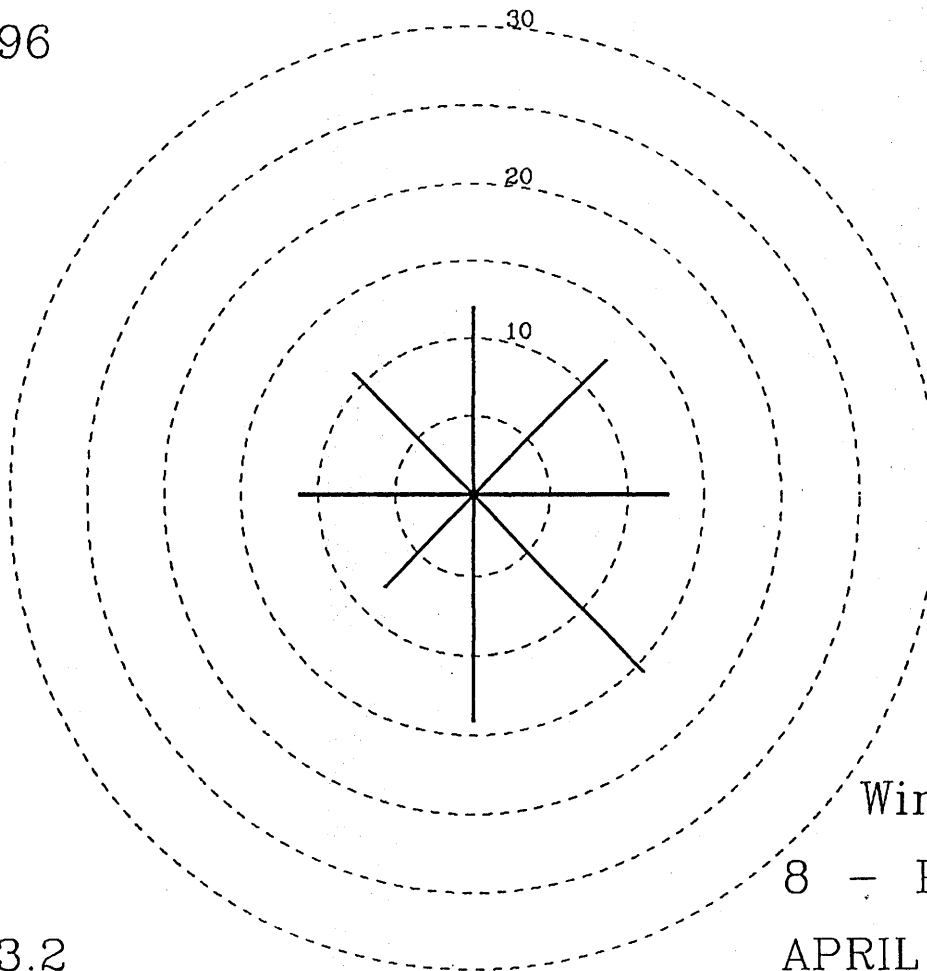
1953-1996



Environment
Canada



DIR	FREQ	SPEED
	%	km/h
N	12.0	19.7
NE	12.2	18.7
E	12.7	17.9
SE	15.6	19.2
S	14.1	16.9
SW	8.0	15.9
W	11.3	19.4
NW	10.9	20.5



%Calm= 3.2

Windrose
8 - Point
APRIL

NORTH BATTLEFORD 'A'

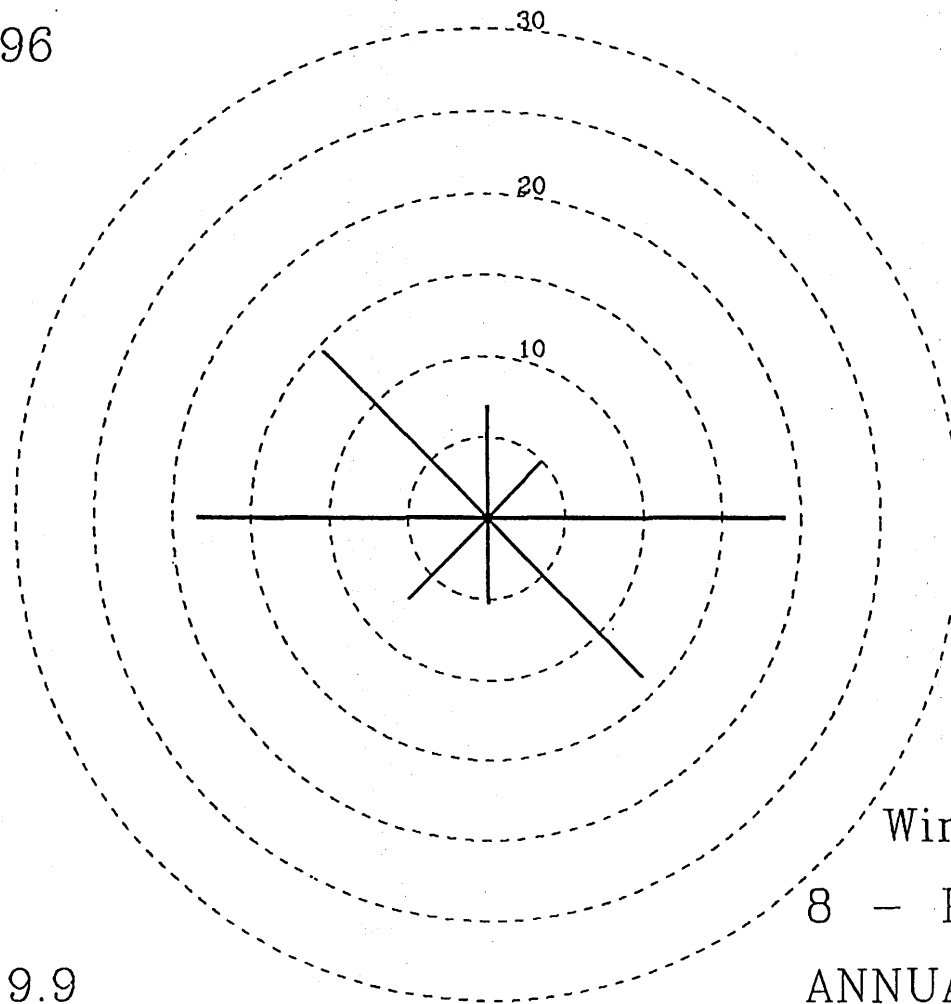
1953-1996



Environment
Canada



DIR	FREQ %	SPEED km/h
N	6.9	15.2
NE	4.9	15.0
E	19.0	19.0
SE	13.8	16.8
S	5.3	12.8
SW	7.1	13.2
W	18.4	16.3
NW	14.6	17.0

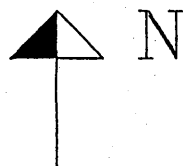


%Calm= 9.9

Windrose
8 - Point
ANNUAL

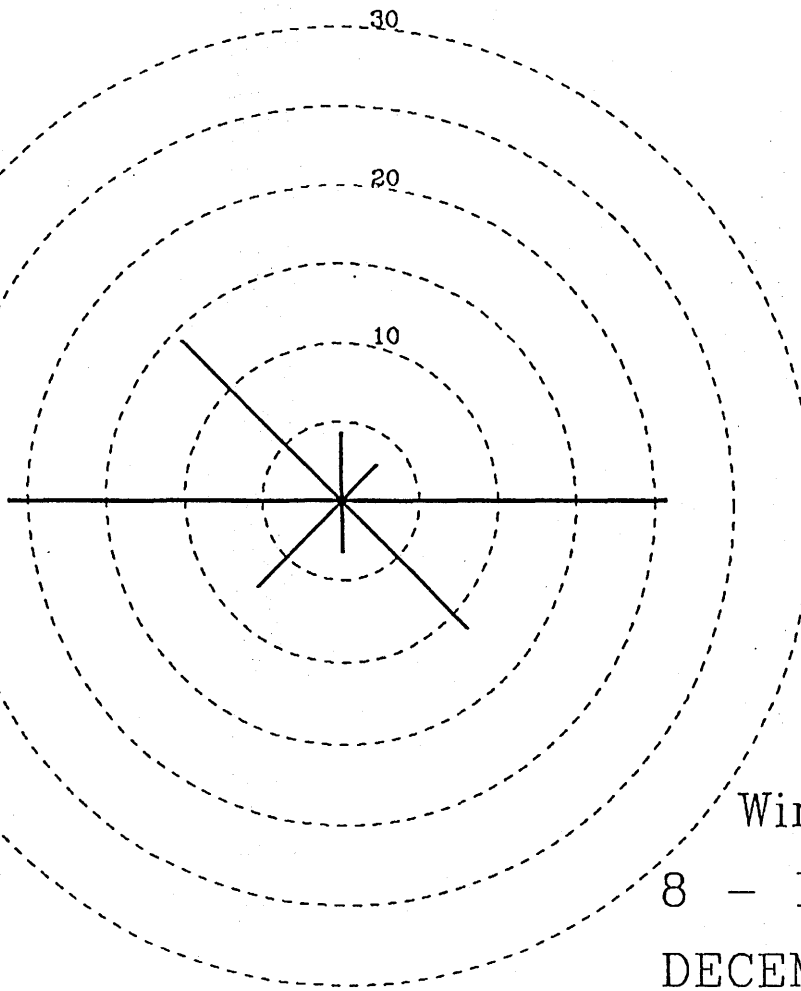
NORTH BATTLEFORD 'A'

1953-1996



DIR	FREQ	SPEED
	%	km/h
N	4.3	13.0
NE	3.2	13.6
E	20.7	19.1
SE	11.2	15.6
S	3.3	9.3
SW	7.6	10.9
W	21.3	15.6
NW	14.3	16.8

%Calm= 14.1



Environment
Canada

Windrose

8 - Point

DECEMBER